DOCUMENT RESUME

ED 047 282 AC 010 115

AUTHOR	Borich, Patrick J.
TITLE	Adult Educators' Decision-Making Regarding Advanced Degrees. Final Report.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C. Bureau of Research.
BUREAU NO	BR-9-E-113
PUB DATE	Dec 70
GRANT	OEG-5-9-239113-0073
NOTE	85p.
EDRS PRICE	EDRS Price MF-$0.65 HC-$3.29
DESCRIPTORS	Administrative Policy, Administrator Role, *Adult Educators, Age Differences, Attitudes, Bibliographies, Cost Effectiveness, *Decision Making, Degrees (Titles), Educational Background, Extension Agents, Factor Analysis, *Graduate Study, Income, *Motivation, Perception, *Professional Continuing Education

ABSTRACT

A study was conducted cn how county Extension agents decide whether or not to seek a postgraduate degree. Using questionnaires completed by 774 agents, the study obtained background data and investigated economic perceptions (cost effectiveness) of an advanced degree, personal factors seen as influencing degree decisions, and attitudes toward the influence of administrative superiors. Relevant factors included improved competence, prestige, formal study difficulties, economic gain and sacrifice, better job opportunities, "revitalization" leave, accessibility of graduate school, and support by peers and supervisors. Agents without advanced degrees related decisions positively to administrator persuasion, better job opportunities, and improved competence; negatively, to economic sacrifice and formal school difficulty. Agents with advanced degrees stressed competence and job opportunities. Younger agents noted many concerns, while older agents responded only to administrator persuasion. Based on these and other findings, several conclusions were reached: the kind of decision making described is complex; adult education administrators can and do influence such decisions; adult educators measure the cost effectiveness of advanced degrees quite accurately and are influenced thereby; and they seem to treat their decision as basically an individual problem. (LY)

ED047282

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

BR 9-E-113
PA 24
AC

FINAL REPORT
Project No. 9-E-113
Grant No. OEG-5-9-239113-0073

ADULT EDUCATORS' DECISION-MAKING REGARDING ADVANCED DEGREES

Patrick J. Borich
The Department of Education
The University of Chicago
Chicago, Illinois 60637

December 1970

U.S. DEPARTMENT OF
HEALTH, EDUCATION AND WELFARE

Office of Education
Bureau of Research

AC010 115

Final Report

Project No. 9-E-113
Grant No. OEG-5-9-239113-0073

Adult Educators' Decision-making Regarding Advanced Degrees

Patrick J. Borich
5835 Kimbark Ave. South
The University of Chicago
Chicago, Illinois 60637

December 1970

The research reported herein was performed pursuant to a grant with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

TABLE OF CONTENTS

	Page
Acknowledgement	iv
Summary	v
INTRODUCTION	1
Specific Purposes of the Study	1
Population Studied	1
Background of the Study	2
METHODS	4
Sampling Procedure	4
Construction of the Instruments	4
Collection and Treatment of Data	5
Methods of Statistical Analysis	6
FINDINGS AND CONCLUSIONS	7
Identification of Indexes by Factor Analysis	7
A Conceptual Look at the Findings	15
Implications of the Study	16
Implications for Adult Educators	16
Implications for Administrators of Adult Education Institutions	17
Implications for Legislators	18
Limitations of the Study	19
Suggestions for Future Research	19
A Concluding Note	20

Table of Contents (continued)

Page

REFERENCES 21

Books 21

Public Documents 21

Unpublished Works 21

BIBLIOGRAPHY 23

Books 23

Articles and Periodicals 23

Public Documents 24

Appendix A - Questionnaire Sent to Agents Without Advanced Degrees . . . . . .

Appendix B - Questionnaire Sent to Agents With Advanced Degrees . . . . . .

Appendix C - Summaries of Regression Analyses by Individual and State - Personal and Administrative Factors in the Agent Advanced Degree Decision . . . . .

Appendix D - The Present Values and Internal Rates of Return for County Extension Agents With and Without Advanced Degrees . . . . . .

TABLES

TABLE 1 - Order of Indexes Identified Through Factor Analyses by Last Degree of Adult Educator 7

TABLE 2 - Order of Indexes of Factors Perceived to be Used by Adult Education Administrators to Influence the Advanced Degree Decision by Present Degree of Adult Educators 11

TABLE 3 - Correlation Matrix of Agent Degree Status, Plans for Degree Decision, Perception of Economic Advantage, Present Values and Internal Rates of Return in 36 States 14

ACKNOWLEDGEMENT

The author would like to express his thanks to Professors William Griffith, Mary Jean Bowman and Charles Bidwell of the University of Chicago for their advice and assistance in the formulation, implementation and analysis of this project. The support and encouragement of Director Roland Abraham and all the University of Minnesota Agricultural Extension staff is also appreciated.

SUMMARY

Advanced degrees are often thought to be symbolic of increased competence for staff members of adult educational institutions and are therefore encouraged by administrators, legislators and the clientele served by the educator. Legislation such as the Education Professions Development Act is based on the assumption that reduced financial costs will be an important factor in persuading educators to pursue graduate study. Actually little research is available capable of identifying accurately what factors are considered by adult educators in making their decision about graduate study.

This investigation had the following purposes: 1) to identify and order the factors considered by adult educators in deciding whether or not to undertake graduate study, 2) to explore the perception of these adult educators regarding the way in which their administrative superiors manipulate those factors seen as being of primary importance in decision-making regarding advanced study, and 3) to determine the relationship among objectively estimated net earning benefits for advanced degrees, the adult educators perceptions of these costs and benefits, and the percentage of those workers obtaining advanced degrees in comparable state adult education organizations.

The population studied included over 6,000 male county Extension agents, staff members of the Cooperative Extension Service. This organization, the largest adult educational institution in the United States, is composed of one quasi-autonomous organization in each state. A random sample of agents was selected from each state and included a maximum of 20 agents ages 25 - 50.

A total of 926 county Extension agents were sent questionnaires developed and pretested, including four parts: Part A - basic demographic data, Part B - economic perceptions of an advanced degree, Part C - attitude toward personal factors identified influencing the degree decision, and Part D - attitude toward administrative influence on the degree decision. There were 774 or 83.6% of the agents who returned the completed questionnaire.

Responses to the questionnaire were divided by last degree of the agent, age, and state. Statistics used for analysis included correlation, coefficient, factor analysis and regression analysis. The economic benefit-costs were obtained by determining the present values and internal rate of return of earning streams in 36 states.

The factors identified to be considered by adult educators in the advanced degree decision include: improved competence, prestige, financial gain, formal study difficulty, administrative persuasion, economic sacrifice, permanent escape, better job opportunities, supervisor-peer support and accessibility of graduate school. Agents without advanced degrees related their degree decision positively to

administrative persuasion, better job opportunities and improved competence while exhibiting a negative relationship with the factors economic sacrifice and formal school difficulty. Agents with advanced degrees correlated only the factors improved competence and better job opportunities positively to their satisfaction with their decision to secure an advanced degree. Both groups of agents related their recommendation to a new agent's degree decision positively with the factors financial gain and supervisor-peer support. Young agents seemed to be concerned about a number of factors while older agents responded only to administrative persuasion.

Factors identified to be controlled by administrators in the Cooperative Extension Service include: economic advantage, better working situation, reduced degree costs, "revitalization" leave, informing clientele, participation in decision-making, personal persuasion, and provision of non-degree learning experiences. Agents without advanced degrees related their degree decision positively to the factors of administrative promise of a better working situation, personal persuasion, and reduced schooling cost as well as negatively to the provision of non-degree learning experiences. Agents with advanced degrees related only one administrative factor--economic advantage positively to their degree decision. Both groups correlated this same administrative factor, economic advantage, to a new agents degree decision.

Present values of earning streams in 36 states were determined and internal rates of return were also obtained. Based on these data, agents in 16 states would actually lose money when the benefits and costs of securing advanced degrees were compared. The national average for all states has a 13 percent return on investment for agents securing an advanced degree at age 30, and a 15 percent return for securing the advanced degree at age 40.

The percentage of agents in the sample who have obtained or intend to obtain an advanced degree in each state correlated significantly with the present values and internal rates of return at ages 30 and 40. Also the agent perception of administrative influence on economic advantage in each state correlated significantly with these objectively estimated earnings benefits.

Based on the analysis of data some conclusions can be submitted. First, a number factors enter into the decision-making process as adult educators consider graduate study. Second, administrators of adult education institutions can and do influence staff member advanced degree decision. Third, adult educators measure with a great deal of accuracy the economic benefits achieved with an advanced degree and this knowledge does relate significantly with their plans to obtain a post-baccalaureate degree. And fourth, the advanced degree decision appears to be considered a personal and individual problem by each staff member.

Implication of this study can be important to researchers in adult education, especially in the areas of the unique methodology used in this study, the factors which affect future graduate students partici-

pation and the administrative research possibilities that become evident. Administrators of adult educational institutions and adult educators may also use this study as a basis for examining organization conditions and factors affecting the local decision-making process. Legislators will be more knowledgeable because of this study that reduced schooling costs can influence agents toward pursuing advanced degrees. Other factors however, must also be considered by legislators in effecting positive agent study decisions. Funds for differentiated income streams, increased personal administrative persuasion, provision of added prestige and relevant cirricula are all means helpful in achieving increased educator degree seeking activity.

INTRODUCTION

By passage of the Education Professions Development Act[9] and consequent appropriation of funds, the United States Congress has attempted to encourage graduate study by educators through financial incentives. The general feeling throughout society has been that any method of providing financial aid or subsequent financial benefit to students of continuing education results in an increase of individuals participating. Governments, organizations and other benefactors imply that financial gain is the factor an individual considers most important when deciding about his own continuing education. The adult educator, in his professional role, has done much to encourage continuing education for the clientele he serves. This investigation has as its major purpose to determine what factors in fact are instrumental in the decision of adult educators to secure advanced degrees.

Specific Purposes of the Study

Administrators of adult education institutions utilize two methods of staff development for their employees. The first, in-service training, consists of learning opportunities provided while the staff member is on the job.

This investigation focuses on the second method available to adult educational administrators - the encouragement of staff members to secure advanced degrees. The specific purposes of this study are to: 1) identify and order the factors considered by adult educators in deciding whether or not to undertake graduate study, 2) explore the perception of these adult educators regarding the way in which their administrative superiors manipulate those factors seen as being of primary importance in decision-making regarding advanced study, and 3) determine the relationship among objectively net earning benefits for advanced degrees, the adult educators perceptions of these costs and benefits, and the percentage of those workers obtaining advanced degrees in each state adult education organization.

Population Studied

In selecting the study population the investigator focused on one adult education institution, the Cooperative Extension Service, for the following reasons: 1) the author was familiar with the Cooperative Extension Service, having served in varying roles in the Cooperative Extension Service in Minnesota, 2) the Cooperative Extension Service is a quasi-autonomous organization within each state in the United States. This quasi-autonomous nature would allow individuals within each state to face many similar problems, yet also be subject to influence that varied by state. 3) Each state Cooperative Extension Service is an integral part of a land-grant college or university. This adult educational institution is

therefore a division of another educational institution requiring advanced degrees as a prerequisite to employment and/or promotion. Members of the resident teaching faculty in each state often apply pressure to the Cooperative Extension Service to upgrade competencies of staff members through securing of advanced degrees, and 4) in 1967, the Federal Extension Service reported a total of 6,171 county agents serving in 3,150 counties in the 50 states, making it the largest adult education institution in the United States.[8]

The study was limited to male county Extension agents because in working with the Cooperative Extension Service the investigator observed an extremely low tenure for most female Extension agents and inclusion of the sex variable would have possibly required doubling the sample size.

Background of the Study

Research in organization and administrative influence was studied in a search for the framework with which to examine the problem identified in this investigation. Most of this research limited the number of reasons that appeared to be evident for county Extension agents responding to administrative influence. The investigator reasoned that the decision to obtain or not to obtain an advanced degree by county Extension agents in the United States may, in fact, not be related to administrative influence.

Theories of decision-making were examined. Donald Taylor, in his discourse on decision-making and problem-solving, describes two major types of decision-making models.[2] Taylor described "economic man" who has three properties: 1)[2] completely informed, 2) infinitely sensitive, and 3) rational.[2] It is, of course, these criteria that tend to dissuade many social scientists from considering economic man a valid model of human decision-making. A second type of decision-making process described by Taylor was "administrative man".[2] Here Taylor basically describes the work of Herbert A. Simon who proposed the "principle of bounded rationality", which describes rationality as being limited and therefore limiting the decision-making of individuals in organizations.[1] These two models do provide conflicting frameworks with which the decision-making process can be viewed.

Little research has been completed on the decision-making of adult educators in regard to advanced degrees. Collings prepared a guide for Extension workers and listed five benefits that may be derived from securing an advanced degree: 1) increased knowledge, 2) better service, 3) self fulfillment, 4) promotion, and 5) salary increase.[7]

Swanson examined factors associated with motivation of county Extension agents in Minnesota for graduate work.[12] He described financial aid and incentives as important positive forces while family obligations, time, and cost were important negative forces.

Pellet examined the attitude of Wisconsin county Extension agents toward graduate study,[11] and concluded that although financial requirements were not a major factor in determining attitudes toward graduate study, these same financial requirements appeared to be important in the decision to pursue graduate study.

Research and practical observation seems to indicate that financial gain is a factor in the decision-making process. Administrators have long considered financial benefits as the most important factor. This is evident from the use of scholarships, fellowships and sabbatical leaves as incentives to encourage county Extension agents to undertake advanced study. Another aspect of financial gain is the prospect of increased earnings with an advanced degree. Thus, the individual must weigh these perceived added earnings with the perceived costs of added schooling in measuring net financial gain through securing an advanced degree.

Economists have attempted to measure financial gain through increased earnings with advanced degrees, but have experienced difficulty in estimating the benefits and cost to earnings over a life span. By considering direct and opportunity costs, economists have now developed improved methods of estimating the economic benefits accruable through education for use in both societal and individual decision-making.

Schultz provided the framework for research on the economics of education.[6] He outlined two basic concepts: 1) that researchers must consider both direct and opportunity costs in calculating economic educational benefits, and 2) that research was essential and valuable "to measure the added benefit education provides in improving the capabilities of people". Since many economists (and educators) have tended over the years to refrain from economic consideration of the effect of education on human capital or even to consider human resources as capital that can be utilized for economic growth, Schultz's study used innovative approaches. Inclusion of opportunity costs (income given up) markedly altered the analysis of economic benefits derived from education.

Utilizing the concepts of human capital formation through education and opportunity costs, Becker[3] and Hansen[4] measured the values and internal rates of return realized by added increments of schooling. The present values are obtained by comparing the costs and earnings of an income stream discounted back to the year of decision. The interest rate that equalizes the present values of two income streams is called the internal rate of return. The concepts of present value and internal rates of return to education are tools whereby benefits can be compared to alternative investments.

Harvey used present values and internal rates of return in studying teachers' salaries in Quebec and hypothesized that whatever the other rewards associated with advanced degrees, the consideration of possible higher earnings enters significantly into the decision-making

process.[10] One might compare the effect of higher rewards for advanced degrees to the concept of the upward sloping supply curve; the higher the rewards, the greater the percentage of adult educators (at the margin) interested in further schooling.

Thus, it would appear that work done on decision-making, the economics of education, and county agent motivations and attitudes toward advanced degrees has some utility in dealing with the problem posed by this paper. It is obvious from the discussion of "economic man" and "administrative man" that no one theoretical framework is ideally applicable to the problem. Thus, the investigator decided to attempt to develop a framework particular to the questions asked in this study.

METHODS

Sampling Procedure

The sample identified for the study was selected after four major decisions were reached. These decisions included: 1) the sample was selected from county staff members of all 50 state Cooperative Extension Services. This national sample, hopefully, captured state similarities or diversities that existed in the advanced degree decision-making process. 2) A maximum of 20 respondents was selected per state. This provided at least a 5.5 percent sample in Texas, the state with the largest number of county staff members, and at the same time opportunity for ample respondents in states with few county agents. 3) The sample was limited to make county agents age 25 to 50. The age limitation was provided to exclude those county staff members who are less than three years removed from undergraduate college and those agents beyond the age generally considered to be valid for considering a decision to return to school for advanced degree study. 4) The sample within each state was randomly selected rather than selected by degree or some other stratification. The data used in sample selection were obtained from the Federal Extension Service for the year 1968.

Construction of the Instruments

Prior to the formulation of the preliminary instrument, county Extension agents other than those selected for the study were interviewed by the investigator. Agents in Illinois, Indiana, and Wisconsin were contacted by mail and in person in order to prepare a comprehensive list of factors considered by agents in the advanced degree decision-making process.

The preliminary instrument was assembled for pretesting containing four parts: Part A contained basic demographic data questions, Part B focused on the economics of an advanced degree and attempted to measure the relative economic value attributed by the respondent to advanced degrees, Part C utilized Likert-type questions[5] to measure attitude

toward the factors identified by agents, Part D also utilized Likert-type questions to measure respondent attitude toward the use of administrative control factors in his state. The temporary instrument was prepared in two versions, one for agents without an advanced degree, the second a modified copy for agents with an advanced degree; the difference between the two forms was the tense of the verbs. The instrument was pretested on ten agents per state from Illinois, Indiana and Wisconsin. Based on the responses of these agents, the instrument was revised and shortened.

The revised instrument was judged for reliability, validity, and objectivity with 12 county agents in Minnesota. Each of the 12 agents was asked to complete the questionnaire and return it to the investigator. Approximately ten days later, the investigator visited each of the agents, asked the agent to complete the questionnaire a second time, and then discussed the questionnaire with the agent following its second completion.

The reliability of the instrument was determined using the Pearson Product Moment Correlation Coefficient of Stability on the test-retest data secured from the 12 agents. These correlations included Part A- .987, Part B- .865, Part C- .960, Part D- .878 and totaled .872 for all parts of the questionnaire. They were judged to be entirely satisfactory.

The immediate supervisor of each agent was interviewed to determine how he felt the agent perceived the advanced degree decision. The comments made by the supervisor were compared to the agent's completed questionnaire and based on this informal analysis, the investigator concluded that the questionnaire accurately measured each agent's perception of his advanced degree decision and his administrator's role in the decision. And because the instrument had been shaped in its entire development by agents, the investigator assumed the instrument was valid.

The interviews with the twelve Minnesota agents were also used in an effort to assess objectivity. Because the agents varied in their attitude toward the advanced degree decision (some felt advanced degrees necessary, others felt them an useless luxury), the interviews were structured to determine whether agents felt free to respond honestly. The general conclusion was that no agent felt the questionnaire had limited his responses to the questions. The completed questionnaires for agents without and with advanced degrees are shown in Appendixes A and B respectively.

Collection and Treatment of Data

Questionnaires were mailed to 926 county Extension agents in September, 1969. Of this total, 388 were sent to agents with degrees while 538 were sent to agents without degrees based on random selection within each state. Thirty-two agents without degrees returned the questionnaires and indicated they had obtained degrees recently or an

error was made in the mailing. By October 15, 1969, 774 or 83.3 percent of the agents (88 percent of the agents with degrees and 81 percent of the agents without degrees) had completed and returned the questionnaires. With the exception of Alaska, at least 65 percent of the agents receiving questionnaires in each state returned completed forms.

Methods of Statistical Analysis

The responses to the questionnaire were analyzed in two groups; with advanced degrees and without advanced degrees. Analyses were also conducted utilizing the individual replies as means or percentages of these individual replies by states.

Frequency distribution and correlation coefficients were obtained for the replies to each of the questions in the questionnaire. Variables were selected from Parts A and B of the questionnaire based on these analyses.

Factor analysis was conducted by degree group for both Part C and D of the questionnaire. Indexes of factors important to the agent decision regarding advanced degrees were identified by degree group from Part C and factors affected by administrators were identified by degree groups in Part D.

The MESA 85 Program was used to determine correlation coefficients, factor analysis, and regression analyses.[13] Regression analyses included two steps for both individual and state analyses. The selected variables were regressed by the identified indexes in the first step of the analysis. The identified indexes were then regressed by the degree decision or recommendation to new agents regarding degree decision for individual analysis. For state analysis, the mean of the indexes were regressed by percentage of agents with advanced degrees, in each state, percentage of agents in the sample from each state either with advanced degrees or planning to secure advanced degrees, and percentage of agents in the sample within each state who recommend that a new agent secure an advanced degree.

Salary data for all male county Extension agents in the United States were obtained and earning streams for agents without and with advanced degrees were determined for each state. Information on advanced degree cost and/or financial aids were secured from Cooperative Extension administrators in each state. Present values and internal rates of return were then determined for the 36 states having at least 15 agents' salaries in each earning stream. Correlation coefficients were determined between present value, internal rate of return, percent of agents with advanced degrees in each state, the percentage of agents from the sample who either have an advanced degree or plan to get an advanced degree within each state, and these same agent's perception of financial gain available for their advanced degree in their state.

FINDINGS AND CONCLUSIONS

Seven questions were posed in this study. These seven questions will be used as a guide to report the findings and conclusions obtained through analysis and interpretation of the data collected.

Question No. 1 - Does the relative importance county Extension agents give to factors considered in the decision regarding advanced degree-seeking vary by the academic degree achieved by the agents?

Identification of Indexes by Factor Analysis

Ten sorts of concerns important to the advanced degree decision were identified by factor analysis as common to both agents without and with advanced degrees. The factor analysis itself described the relative order of importance of these indexes in accounting for variability described by the factors. Table 1 names the indexes and outlines the differences in ordering of these factor indexes by agents without or with advanced degrees.

TABLE 1

ORDER OF INDEXES IDENTIFIED THROUGH FACTOR ANALYSES BY LAST DEGREE OF ADULT EDUCATOR

	Rank of Associated Factors in Factor Analysis	
Attitude Indexes	Agent Without Adv. Deg.	Agent With Adv. Deg.
Improved Competence	1	1
Prestige	2	2
Financial Gain	4	3
Formal Study Difficulty	3	4
Administrative Persuasion	5	6
Economic Sacrifice	6	10
Permanent Escape	7	9
Better Job Opportunities	8	8
Supervisor-Peer Support	9	5
Accessibility of Graduate School	10	7

Two regression analyses were calculated for agents without advanced degrees. Selected variables were regressed by each of the indexes identified and the indexes, in turn, were regressed by the personal advanced degree decision of the individual and the recommendation of the individual to new agents regarding advanced degrees. See Appendix C-1.

For agents without degrees, five indexes related significantly to the personal degree decision. These indexes were in order of their Standardized Beta Weights which described their relative effect on

the model; administrative persuasion (F=41.55**, B=.274), better job opportunities (F=14.73**, B=.239), economic sacrifice (F=20.40**, B=-.194), improved competence (F=13.61**, B=.191), and formal school difficulty (F=13.65**, B=-.155). For the regressions described in this paper: F=F Ratio in the Regression Model, B=Standardized Beta Weight in the Regression Model, *=Significance $p<.05$, **=Significance $p<.01$. The multiple R^2 for this regression was .309 which suggested that the indexes identified did contribute to a large extent to the personal degree decision. Selected variables related significantly to agent perception of these five indexes in the following manner with the directions of the relationship in parenthesis: 1) administrative persuasion - percent of advanced degrees in state (+), age (-), and salary (-); 2) economic sacrifice - degree cost (+), percent of advanced degree in state (-) and number of children (+); 3) better job opportunities - percent of advanced degree in state (+) and salary (-); 4) formal school difficulty - age (+) and perception of alternative employment (+); 5) improved competence - tenure (-) and degree cost (-).

These same agents without advanced degrees considered three different factors to their recommendation to new agents in regard to advanced degrees. Agents without advanced degrees related the factors of prestige (F=16.78**, B=.2063), financial gain (F=6.56**, B=.1295), and supervisor-peer support (F=4.19**, B=.0975) to new agents securing advanced degrees. The multiple R^2 for this regression was .090, a figure that seems consistently low with the abstractness of recommending the decision for "others".

The regression analyses with agents who had already received advanced degrees detailed a reduced number of indexes important in the personal degree decision: improved competence (F=11.23**, B=.1894) and better job opportunities (F=8.48**, B=.1645). These agents did not identify the indexes administrative persuasion, economic sacrifice and formal school difficulty as important to them in making their degree decision as did agents without advanced degrees. Among the relationships of the selected variables with the indexes, the positive connection of salary to the agent's perception of improved competence as a factor may be particularly significant. As agents obtain increased economic benefits, the individuals seem to turn to personal improvement in the ability to master their occupation.

In both agent groups, the indexes financial gain and supervisor-peer support related positively to agent's recommendation for new staff regarding advanced degrees. Agents with advanced degrees added better job opportunities as a factor in the new agent recommendation. These results tend to accentuate the importance of these three factors in the degree decision.

It seems evident that the relative importance county Extension agents give to factors considered in the decision regarding advanced degree-seeking does vary by the academic degree achieved. This

is especially true when comparing the factors related to the agent's personal decision, whereas agents are more consistent in viewing factors important in the decision of others.

It appears that agents without degrees are concerned with immediate practical factors in their advanced degree decision. Factors such as personal administrative persuasion, reduced cost of the degree and the availability of better job opportunities are important to these agents. Agents who have obtained the degree, however, identify the competence secured by graduate study as more important to the decision. Both groups of agents did look to financial gain and supervisor-peer support when relating to the degree decision in the abstract (for others).

In general the major difference noted centers on the need for competence perceived available through graduate study by agents with advanced degrees. This awareness of both the source and importance of continued schooling seems to be a factor worth cultivating if agents are to be influenced toward advanced degree work.

Question No. 2 - Which factors considered by county Extension agents are perceived by the agents as having the most significant effect on their decision-making process regarding advanced degrees?

The results of the regressions from agents without advanced degrees provide an answer to this question. Certainly the list must include the factors administrative persuasion, better job opportunities, economic sacrifice, improved competence, and formal school difficulty as factors relating to the personal decision of Extension agents. It would seem appropriate also to add the factors prestige, financial gain and supervisor-peer support. These factors were not associated with the agent's personal degree decision, but were related positively to his advice to other agents.

Two variables often perceived to be related to an agent's degree decision are age and the state Cooperative Extension Service that employs him. In order to measure relationships that occur by age groups and states two subsequent regression analyses were run. The responses of agents without degrees were divided by age groups in order to identify relationships between perceived factors and a positive advanced degree decision. The state analyses utilized all responses within each state in hope of capturing state affect on the perception of factors by agents. The use of age and state in analysis allowed the investigator to determine if the significance of factors perceived by agents varied when related to these variables.

The responses of the agents without advanced degrees were divided into three age groups: 1) age 25-35 (n=160), 2) age 36-44 (n=127), 3) age 45-50 (n=103). (See Appendix C-2) The effect of age appears to be: 1) younger agents perceive a larger number of factors as impor-

tant in the advanced degree decision than do older agents, 2) older agents react to administrative persuasion as the most important factor while younger agents are concerned with other factors as well, 3) financial gain and/or economic sacrifice enter into every personal decision or recommendation to new agents except one (the personal decision of agents age 45-50), 4) younger agents perceive better job opportunities as a major positive factor in their decision to secure an advanced degree, and 5) the factor of leaving the Cooperative Extension Service through obtaining an advanced degree enters into the graduate study decision of young agents.

In the state analysis (Appendix C-3), the advanced degree decision related negatively to economic sacrifice and leaving the Extension Service permanently and positively to financial gain and an economic commitment to extension work. It would appear that states in which agents are provided reduced cost for added schooling and increased earnings after securing the advanced degree along with an organizational climate that would increase their desire to remain with the state Extension Service would provide the basis for more agents to secure advanced degrees. Basically, the state analyses substantiated and emphasized the individual analysis regarding factors affecting advanced degree decisions by agents.

The factors considered by county Extension agents as having the most significant effect on their decision-making regarding advanced degrees varies by last degree achieved, age and location. No one factor appears to be the most significant in all cases.

Three major categories of factors have significant effects: 1) Economic, the apparent financial gain obtainable by securing or forsaking an advanced degree and the economic sacrifice involved in graduate study; 2) Personal, the improved competence secured through graduate study or the difficulty perceived informal study toward a degree; and 3) Organizational, the better job opportunities and prestige present, the personal administrative persuasion or supervisor-peer support that influence graduate study and the ability of an agent to gracefully leave the organization all affect the graduate degree decision. None of these factors appears "most significant" in all cases, yet the order of presentation does roughly correspond to decreasing importance taking all regressions into consideration.

Question No. 3 - Does the perception by county Extension agents regarding administrative manipulation of factors affecting the advanced degree decision vary according to the academic degree of the agent?

Indexes of factors perceived to be used by administrators to influence the advanced degree decision of agents were determined by factor analysis. The indexes and their order in the factor analyses by degree status are found in Table 2.

TABLE 2

ORDER OF INDEXES OF FACTORS PERCEIVED TO BE USED BY ADULT EDUCATION ADMINISTRATORS TO INFLUENCE THE ADVANCED DEGREE DECISION BY PRESENT DEGREE OF ADULT EDUCATORS

Factor	Rank of Index in Factor Analysis: Agent Without Advanced Degree	Agent With Advanced Degree
Economic Advantage	1	2
Better Working Situation	2	1
Reduced Degree Costs	3	7
"Revitalization" Leave	4	6
Informing Clientele	5	5
Participation in Decision-Making	6	3
Personal Persuasion	7	4
Provide Non-Degree Learning Experiences	8	8

Although agents with and without advanced degrees agree that increased earnings and better working situations are the two primary factors affected by administrators, agents without advanced degrees rank reduced degree costs and granting "revitalization" leave higher than do agents with advanced degrees. The ability to participate in decision-making and the personal persuasion of the administrator are ranked high by agents with advanced degrees.

Regression analyses were computed using selected variables as independent variables, regressing on them the administrative factors and subsequently using the administrative factors as independent variables on which were regressed the personal decision by agents regarding advanced degrees plus the agent's recommendation to new extension agents regarding advanced degrees. (See Appendix C-4). Four administrative factors seem to influence the personal advanced degree decision of agents without advanced degrees: they include a promise of a better working situation ($F=13.07^{**}$, $B=.199$), a lack of non-degree learning experiences provided in the organization that compete with graduate study ($F=12.44^{**}$, $B=-.175$), increased personal persuasion by the administrator ($F=4.88^{**}$, $B=.110$), and reduced cost for the advanced degree ($F=4.60^{*}$, $B=.105$) [$MR^2=.116$]. Again these agents cite the only administrative factor relating to the new agent's decision would be economic advantage ($F=14.16^{**}$, $B=.184$), results that are very similar to those found in previous analyses.

Agents with advanced degrees relate only one administrative factor, economic advantage ($F=33.61^{**}$, $B=.290$), to their personal degree decision. This same factor occurs predominantly in their recommendation to the new agent regarding the securing of an advanced degree ($F=14.69^{**}$, $B=.203$).

Agents seem to vary by degree in their perception of administrative influence factors on the advanced degree decision. Where agents without advanced degrees perceive administrators influence by providing better jobs, few "competitive" training or non-degree activities and reduced cost for a degree, agents with advanced degree focus only on administrative influence by provision of economic advantage.

Question No. 4 - Do county Extension agents from the group of states having a high percentage of agents with advanced degrees perceive differently administrative manipulation of factors affecting advanced degree decision-making than agents from groups of states with a low percentage of agents with advanced degrees?

It would appear that relationships between the variables identified and the administrative indexes are well defined in states with a high percentage of agents with advanced degrees and almost non-existent in the states with a low percentage of agents with advanced degrees. One could therefore conclude that there is a considerable difference in the perception of administrative manipulation of factors from state to state.

The regression of the administrative indexes on agent personal decisions regarding advanced degrees and the decisions of other agents once again emphasizes the reduced cost, economic advantage and a lack in non-degree learning experiences. In other words, states that assist in making advanced degrees profitable and do not provide alternate non-degree learning activities stimulate advanced degree-seeking by agents.

Based on the state regressions (Appendix C-5) it appears that agents do vary by states in their perception of administrative manipulation of factors affecting their degree decision-making. Agents in states with a high percentage of staff members with or planning to obtain advanced degrees perceive administrators reducing cost and increasing earnings to agents with additional graduate degrees. Agents in low percentage states however, either fail to perceive administrative manipulation or this manipulation regarding advanced degrees does not exist. Since this problem focused on agent perception of administrative influence one must conclude that agents in low states do not perceive any systematic advanced degree influence in their state.

Question No. 5 - Which of the factors considered by agents without advanced degrees to be important in deciding whether or not to pursue an advanced degree do they perceive to be overlooked by their administrators?

It is possible to compare the factors identified by agents without advanced degree as important to their degree decision with the administrative factors these same agents identified in order to determine overlooked factors. By comparing these two sets of factors, the factors administrative persuasion, economic sacrifice, financial gain, and better job opportunities seem to be perceived as utilized by many administrators in influencing agents to secure advanced degrees.

The following factors perceived significant in the advanced degree decision of agents without degrees are not perceived by them as being influenced by administrators: reduction of non-degree learning experiences, lowering of formal school entrance requirements, develop agent awareness of the need for improved competence, and provide added prestige for agents with advanced degrees. It must be noted administrators may not have the necessary resources or desire to function in all these "overlooked" areas.

Question No. 6 - Does the present value and internal rate of return for advanced degrees in each state Cooperative Extension Service correlate positively with the percentage of agents obtaining advanced degrees in that state?

Following the analysis of the benefit-cost for advanced degrees in each state Cooperative Extension Service, the present value and internal rate of return did not correlate positively with the percentage of agents currently holding advanced degrees in the state. However, the percentage of agents in the sample responding to the questionnaire from each state that either had an advanced degree or planned to secure one did correlate positively to the present value and internal rate of return in each state. (Table 3) This would seem to indicate a positive relationship between the advanced degree decision and increased economic advantage but interference from other factors in implementation of the decision. Also, present perception as a guide to future behavior is better than present perception of conditions as explanation of the conditions.

An earning stream or the expected annual salary for each year from age 30 through age 65 were calculated for both agents with and without degrees in 36 of the state Cooperative Extension Services having large enough staff to do so. Data were obtained from the Federal Extension Service and the directors of each of the Cooperative Extension Services: the directors were also asked to estimate the costs involved in added schooling plus any financial aids or leave policies available for agents seeking graduate degrees in their states. Based on discounting the earning streams back to age 30 and age 40 and including both opportunity and direct plus added income from fellowships, sabbaticals, etc., the present value was determined for income streams of degree and non-degree agents in each of the 36 states. (See Appendix D-1) Sixteen states showed no financial gain at any interest rates for agents with advanced degrees. In these 16 states an agent without an advanced degree would have lost money by securing the degree. Certainly the income for agents with advanced degrees was usually larger in a single year in a particular state than was the salary identified for agents without degrees. However, when added costs and income were considered and the income streams were discounted back to the decision year it was apparent in 16 states that graduate study resulted in an economic loss by current salary standards.

By comparing the two present values in each state discounted back to decision points of age 30 and age 40, it was possible to determine an internal rate of return or measure of interest rates at which the two earning streams were equal. (Appendix D-2) The internal rates of return by state varied from less than zero percent to over 20 percent. (Appendix D-3) The national average was 13 percent return on investment for agents making the decision regarding added schooling at age 30 and fifteen percent for agents making the decision at age 40. The added return for investment at the later age arises due to the increased difference between salaries paid nationwide for agents with advanced degrees over agents without advanced degrees during the middle years of the professional career (age 40-50).

The present values and internal rates of return for both age 30 and age 40 were correlated with the percentage of agents in the sample who either planned to get an advanced degree or who have already obtained one. The correlation was significant at the .05 level (Table 3). It is impossible to determine if high economic benefits precludes a large number of agents with advanced degrees or vice versa. The significant relationship that exists does however promote the conclusion that the economic factors of financial gain and reduced economic sacrifice are very important in the decision-making process of adult educators.

TABLE 3

CORRELATION MATRIX OF AGENT DEGREE STATUS, PLANS FOR DEGREE DECISION, PERCEPTION OF ECONOMIC ADVANTAGE, PRESENT VALUES AND INTERNAL RATES OF RETURN IN 36 STATES

	1	2	3	4	5	6	7
1	1.000						
2	.682**	1.000					
3	.377**	.488**	1.000				
4	.226	.326*	.336*	1.000			
5	.197	.384*	.313	.681**	1.000		
6	.177	.258	.289	.828**	.723**	1.000	
7	.166	.325*	.192	.599**	.914**	.653**	1.000

* $p < .05 = .321$
** $p < .01 = .413$ (36 observations)

1=% of state agents with advanced degree
2=% of sample in each state with degree or planning to get degree
3=Perception of agents in sample of economic advantage provided for advance degree
4=Difference between present values discounted at 10% to age 30
5=Difference between present values discounted at 10% to age 40
6=Internal rate of return - age 30
7=Internal rate of return - age 40

Question No. 7 - Do the benefits and costs of an advanced degree perceived by an Extension agent correlate positively with the objectively estimated net earnings benefit in that state?

The perception of net earning benefits for this analysis was obtained by securing the mean perception of economic advantage for each of the 36 states from those responding to the questionnaire used in this study. By correlating this mean against the objectively estimated earnings benefits (present values and internal rates of return) a significance at the .05 level was obtained. (See Table 3)

Based on this finding one might conclude that an adult educator is an "economic man".[2] Although rationality of decision-making is certainly not perfect, it would appear that county Extension agents accurately perceive economic benefits available to them by the added investment in graduate study. And based on other analyses, these same county Extension agents (at least at the margin) make graduate study decisions based on their economic knowledge.

A Conceptual Look at the Findings

In responding to the questions developed for this study, a number of difference statistical and experimental systems have been used by the investigator. The bits and pieces of the problem need reassembling into a broad conceptual view of the advanced degree decision and how administrators may affect it within an adult education organization.

First, economists have been correct (or at least convinced adult educators they are correct) in assuming an important priority on an individual's ability to measure in some manner the benefit-cost of investment in his own education. Apparently through formal or informal means, an adult educator does rely on his perception of the economic value achievable through an added advanced degree and the cost in lost income and direct expense in obtaining the degree in making a decision about further formal schooling.

The relative timing of the graduate study is also affected by many other factors including the better jobs that may be available, the need for improved competence in his job, the prestige he might secure, and the relative "pressure" either applied or not applied by administrators in his organization and his peers. Personal problems such as difficulty with formal school participation can also affect the time when an agent will seek graduate training.

Administrators in educational organizations influence both the decision of staff members relative to advanced degrees and the decision's implementation. Administrators who provide financial gain, reduce costs, make personal appeals and give general administrative support to advanced schooling do effectively influence more staff members to seek degrees. Surprisingly administrators who provide additional educative experiences such as in-service training may in some cases inhibit advanced degree study by staff.

The advanced degree decision appears to require a personal and individual solution by adult educators. Certainly many factors intervene in the decision by the eudcators look to different factors for "others" than they do in their own case. Thus, just as individual learning is a private phenomenon so is the act of deciding about formal education.

Implications of the Study

The implications of this study are presented in four categories: implications for the researchers of adult education, implication for adult educators, implications for administrators of adult education institutions and implications for legislators appropriating money to adult educational institutions.

Implications for researchers in the Field of Adult Education

This study provides researchers in adult education with a series of concepts to consider in expanding or improving knowledge about the education of both adults and adult educators. These concepts include:

1) The methodology in the study. The methods used in this study combine the socio-psychological approach often used in educational research with an organizational approach in looking at decision-making. Added to these two disciplines is a third, the economics of education, which provides a new method of examining the problem. The combination of these approaches allowed conclusions to be reached after comparisons of results from all three systematic observations of the same population.

2) Participation in graduate study. This investigation provides the field of adult education with knowledge of the decision-making process of its practitioners toward their own continuing education. The factors identified and ordered provide a basis for comparison with factors proposed by others when studying adults utilizing adult education opportunities. The apparent focus on economic advantage and professional development permit greater understanding of adult educators themselves as well as the clientele.

3) Administrative influence. This study increases the perspective of adult education researchers on how administrators influence staff member decisions within the largest adult education institution in the world. This fact alone provides a basis for further studies of other educational organizations along with providing investigators in other disciplines a base for organizational research. The results of this study clearly show the large effect administrators have on decisions made by staff members in their organization.

Implications for Adult Educators

Implications are offered to adult educators facing the advanced degree decision. Based on this study, groups of adult educators could: 1) seek to provide financial aid to reduce economic sacrifice.

Groups of adult educators could organize and secure fellowships, scholarships, sabbatical leave or any type of financial aid in order to reduce the economic sacrifice of graduate study. 2) Request and utilize non-degree learning activities without replacing graduate study for securing increased competence. 3) Support development of salaries that provide financial gains to agents with advanced degrees. Obviously, earning streams in many states are based on factors other than advanced degrees; this may be a desirable practice. If, however, the number of agents within a state who have advanced degrees is to be enlarged, differentiated net income by degree may be a method of achieving this objective.

Based on this study, it would appear that adult educators should plan to secure the advanced degree at a young age if at all possible. A primary reason for this implication is the fact that the graduate degree can be achieved at less cost at an earlier age due to less opportunity cost of earnings foregone.

Many agents appear to obtain advanced degrees even in states where a financial loss is incurred with an advanced degree. Likewise some agents do not obtain advanced degrees in states where the return on investment is high. Obviously the decision to return for graduate study is a very personal one. If agents reside in states where some factors appear to be of greater influence than is the case nation-wide efforts at altering this factor may result in more advanced degrees by agents than would a larger salary. For example if no graduate school curriculum is available to assist agents improve their competence within a state, provision of an adequate program may positively influence agent degree-seeking behavior much more effectively than substantial salary increases or reduced study costs.

Implications for Administrators of Adult Education Institutions

The study offers the following implications to the administrators of adult educational institutions seeking to influence agents toward graduate study:

1) Provide more fellowships, scholarships, or other sources of financial aid for graduate study. Reduced cost for graduate study seems to influence the advanced degree decision of many agents.

2) Provide differentiated earning streams and increased financial gain for staff members with advanced degrees. Agents seem to measure accurately the relative return on investment in graduate study. Thus if advanced degrees have a high priority some economic evidence is necessary.

3) Reduce the organizational emphasis on in-service training as a substitute for graduate study. Agents seem to look to non-degree learning activities as a method of improving competence.

Care should be taken to avoid "competition" between degree and non-degree activities.

4) Promote the earning of advanced degrees among Extension agents through the use of personal administrative persuasion. The personal contact of a supervisor appears to legitimize the importance placed within an organization on advanced degree-seeking.

The general lack of perception of administrative influence regarding advanced degree-seeking evident in some states supports improved goal identification and communication by administrators. It is apparent that what is presumed to be clear regarding many administrative influences by administrators is not clear to the staff members.

Implications for Legislators

This study offers the following implications to legislators seeking to provide incentives for adult educators to obtain degrees:

1) Funds are helpful in encouraging graduate study. Funds for reducing the cost of graduate study and also for differentiating income streams for staff members with graduate degrees appear to be appropriate ways of encouraging advanced degree-seeking behavior.

2) Legislators should insist that economic aids be accompanied by other factors such as personal administrative persuasion, added prestige and graduate curricula important to improving adult educator competence. Legislation such as the Education Professions Development Act should provide guidelines including other forms of administrative influence in addition to the inclusion of funds in order to better reach the overall goals of the legislation.

3) Require development of a comprehensive organizational goal of improved performance through professional improvement of staff by formal and informal means. Legislators hoping to encourage adult educators to do graduate work should consider as a requirement the development of supplemental continuing education for staff members rather than learning activities competing with graduate degree programs.

The implications for legislators listed assume that educators should obtain advanced degrees and legislators have some responsibility to encourage and expedite this practice. These assumptions are based on the concept of adult education itself and the historical practice of legislators providing leadership in providing directions through funding practices. Most adult educators function on the philosophy that added schooling is beneficial to the individual. Certainly adult educators are individuals who are vitally important to the achievement of a literate knowledgeable citizenry. As such state and federal legislators have not only an opportunity but a responsibility to improve the professional skill and competence of these educators through methods like supporting graduate study.

Limitations of the Study

A major limitation to the generalizability of the findings of the study was the restriction of the sampling to one adult education organization. In most cases, the Cooperative Extension Service has accentuated the need for improved competence and graduate degrees for its employees. Although utilization of many organizations might have been helpful, the results from this study would appear to have merit not only in other adult educational institutions but also in other organizations encouraging staff member graduate study.

A second limitation of the study was the exclusion of part-time graduate study in determining present values and internal rates of return. Bringing in part-time study would have provided a whole host of new variables in the economic analysis.

Another limitation of the study was the securing of salary data and the perception on the written questionnaire from the respondents with a one year time lag. This lag was not thought to alter the results to any great extent.

Suggestions for Future Research

This study provides a basis for related research in adult education. Four of the possible directions for research include:

1) An enlargement of this study to include other adult educational organizations to compare how organization objectives alter staff perception and action. A future study may want to look at adult educational organizations other than the Cooperative Extension Service such as public school adult education, labor union education, libraries, correspondence courses and a host of other organizations to see if the priority and kinds of adult education alter the results secured.

2) A study, conducted on a single organization in a longitudinal manner would determine changes that occur naturally in the perception of factors affecting graduate study by staff members. When does the organizational climate within an adult organization change from a negative to positive attitude toward advanced degrees? How much do staff members vary in their perception of factors related to advanced degrees as they function within an organization? A longitudinal study would be essential in answering these questions.

3) An experimental study of the factors identified by this study within an organization to note changes in the graduate degree-seeking behavior of staff members is needed. As an example, if an organization were selected in which economic sacrifice were reduced and/or financial gain increased, the results in the perception of degree-seeking by staff members would be an important addition to the knowledge reported in this study.

4) Future studies may be focused on a more precise identification of factors in order to develop a framework capable of accurately predicting the degree decision of an individual at the time of his hiring. Organizations that depend on staff member advanced degrees for funding would find such a framework extremely desirable.

A Concluding Note

This study has provided a general guide to the decision-making of county Extension agents as they face the problem of securing an advanced degree. The findings may be interpreted to describe the county agent as a rational analytical "economic man" influenced by personal advancement in financial resources and career. The experience of the author is the source of many exceptions to this description. A large number of county agents have secured advanced degrees based on what must be termed economic irrational reasons. County agents have developed a reputation among clientele of being knowledgeable, up-to-date adult educational leaders. This study does not dispute this fact but rather accentuates the use of knowledge by these adult educators as they make a personal decision.

REFERENCES

Books:

1 - Simon, Herbert A. Models of Man. New York: Wiley, 1957.

2 - Taylor, Donald W. "Decision-Making and Problem Solving." Handbook of Organizations, Ed. by James March (Chicago: Rand-McNally, 1965), Chap. 2, pp. 48-86.

3 - Becker, Gary S. "Underinvestment in College Education." American Economic Review, May, 1960, pp. 346-54.

4 - Hansen, W. Lee "Total and Private Rates of Return to Investment in Schooling." Journal of Political Economy, LXXI (April, 1963), pp. 128-40.

5 - Likert, Rensis. "A Technique for the Measurement of Attitudes." Arch. Psych., No. 140 (June, 1932).

6 - Schultz, Theodore W. "Human Capital Formation by Education." Journal of Political Economy, XLVIII (December, 1960), pp. 571-84.

Public Documents:

7 - Collings, Mary. "Graduate Study For Me?" A Guide for Extension Workers. Federal Extension Service, U.S.D.A. Bulletin No. PA-522, 1962, p. 4.

8 - Federal Extension Service. Report No. FES-120.

9 - Public Law 90-35 passed June 29, 1967, for implementation on June 30, 1968 (an amendment and extension of Title V of the Higher Education Act of 1965).

Unpublished Works:

10 - Harvey, Valiern. "Economic Aspects of Teachers Salaries." Unpublished Ph.D. dissertation, University of Chicago, 1967.

11 - Pellet, Vernon L. "Wisconsin County Extension Agents' Attitude Toward and Appraisal of Graduate Study." Unpublished M.S. thesis, University of Wisconsin, 1966.

12 - Swanson, Harold B. "Factors Associated with Motivation Toward Professional Development of County Agricultural Extension Agents in Minnesota." Unpublished Ph.D. dissertation, University of Wisconsin, 1965, pp. 86-89.

13 - Wright, B. C., C. Bradford and R. Strecker, MESA 85, a statistical program developed at the University of Chicago's Educational Statistics Laboratory, October, 1955; revised May, 1968.

BIBLIOGRAPHY
(In addition to those cited in References)

Books:

Agricultural Extension Service. A Guide to Extension Programs. North Carolina State College, Raleigh, N.C., 1959.

Bowman, M. J. "The Costing of Human Resource Development." The Economics of Education. 1963 Conference of the International Economics Association, London, MacMillan, 1965.

Cartwright, Dorwin. "Influence Leadership, and Control." Handbook of Organizations. Edited by James March, 1965.

French, J. R. P., Jr., and Raven, B. "The Bases of Social Power." Studies in Social Power. Edited by D. Cartwright. Ann Arbor: University of Michigan, Institute for Social Research, 1959.

Gilman, G. "An Inquiry into the Nature and Use of Authority." Organizational Theory and Industrial Practice. Edited by Mr. Haire. New York: Wiley, 1962.

McGregor, D. M. The Human Side of Enterprise. New York: McGraw-Hill, 1960.

Power, B. Russell. A New Social Analysis. London: Allen and Unwin, 1938.

Simon, Herbert A. Administrative Behavior. New York: MacMillan, 1947.

Articles and Periodicals:

Kelman, H. C. "Compliance, Identification, and Internalization: Three Processes of Attitude Change." Journal of Conflict Resolution, 2 (1958), pp. 51-60.

Miller, Herman P. "Annual and Lifetime Income in Relation to Education, 1929-1959." American Economic Review, I (December, 1960), pp. 962-986.

Pearlin, L. I., and Rosenberg, M. "Power-Orientations in the Mental Hospital." Human Relations, 1962, pp. 335-50.

Public Documents:

Federal Extension Service, Report of Programs in Extension Education for Professional Extension Workers. ER & T, 1961, pp. 1-62

Federal Extension Service. Report of Programs in Extension Education for Professional Extension Workers. ER & T, 1965.

USDA-NASULGC Joint Study Committee on Cooperative Extension. Report of the Committee. A People and a Spirit. Fort Collins: Printing and Publications Service, Colorado State University, 1968.

Appendix A

Questionnaire Sent to Agents

Without Advanced Degree

Appendix A

Questionnaire Sent to Agents Without Advanced Degree

ADVANCED DEGREE DECISION-MAKING QUESTIONNAIRE

The following questionnaire has been prepared to obtain your ideas on advanced degrees for county agents. For the purpose of this study, advanced degrees are considered A DEGREE BEYOND A BACHELOR'S DEGREE in any field of study. The questionnaire is divided into four parts that have questions composed to provide a short (and relatively painless) answering session for you. The entire process should not take more than 30 minutes to complete.

Please read the instructions for each part carefully, and check the answers that best express your ideas about the subject. Your name has been selected at random from the list of county agents in the United States; your answers will be combined with those of other agents in the sample and will be confidential and never used or identified individually. The results of your answers, in combination with answers from your co-workers, will be valuable for aiding county agents and Cooperative Extension administrators make future individual or policy decisions about advanced degrees. These individual or policy decisions may then affect the extent to which the Cooperative Extension Service places emphasis on advanced degrees.

According to my records you ___/___ do / do not have an advanced degree at this time. If my information is inaccurate, please return this questionnaire to me without completing it, and I will send you the proper form. If the information is correct, please give me your frank answers to the following questions.

PLEASE RETURN BY SEPTEMBER 15 TO:

Patrick Borich, District Supervisor
County Extension Work
Cooperative Extension Service
University of Minnesota
Coffey Hall
St. Paul, Minnesota 55101

Part A: Your Vital Statistics

Instructions:

Please check the one reply for each question that best applies to you. Answer all questions based on the situation today; that is, if you will be age 35 tomorrow, you would reply age 34 for question 1.

NOTE: Please disregard the numbers found within parentheses for each question. These numbers will be used to code your answers for analysis by computer.

1. (10, 11) What is your age? _____

2. (12) What is your present marital status?
   1._____single
   2._____married without children
   3._____married with children not at home
   4._____married with children at home (13) number_____
   5._____widowed or divorced without children at home
   6._____widowed or divorced with children at home (13) number_____

3. (14, 15) How many years have you worked for the Cooperative Extension Service? (Please include work in other states.) _____

4. (16, 17, 18) What is the highest grade in school achieved by:

	(16) Your Father	(17) Your Mother	(18) Yourself
1. less than grade 8	1. _____	1. _____	1. _____
2. grade 8	2. _____	2. _____	2. _____
3. grade 12	3. _____	3. _____	3. _____
4. two years of college	4. _____	4. _____	4. _____
5. bachelor's degree	5. _____	5. _____	5. _____
6. bachelor's degree plus some graduate study	6. _____	6. _____	6. _____
7. master's degree	7. _____	7. _____	7. _____
8. master's degree plus some graduate study	8. _____	8. _____	8. _____
9. doctor's degree	9. _____	9. _____	9. _____

5. (19, 20) Were either of your parents teachers?

	(19) Your Father	(20) Your Mother
1. yes	1. _____	1. _____
2. no	2. _____	2. _____

6. (21) In your present position, are you the agent who is administratively responsible for your county extension office?
   1._____yes 2._____no

Part A. continued

7. If you were to consider returning for an advanced degree, what college or university would you plan to attend? (If you already have an advanced degree, which college or university did you attend?) Please name one.

_____

8. (22, 23, 24) How far is the college or university named in question 7 located from your present home? Give approximate number of miles. _____

9. (25, 26) How many hours does it take to drive by car from your home to the college or university named in question 7? _____

10. (27) What would you estimate your direct costs to be for an advanced degree if or when you attended the college or university named above? (Direct costs include tuition, books, and any other educational expenses exclusive of living costs.)

1._____less than $250
2._____$251-$500
3._____$501-$750
4._____$751-$1,000
5._____$1,001-$1,250
6._____$1,251-$1,500
7._____over $1,500 (If over $1,500, please estimate the approximate amount_____.)

11. (28) Do you have any physical ailments that would prevent you from attending graduate school?
1._____yes 2._____no

12. (29) Do any of your brothers or sisters have (or are working toward) advanced degrees?
1._____yes 2._____no

13. (30) Do any of your wife's brothers or sisters have (or are working toward) advanced degrees?
1._____yes 2._____no

PLEASE GO TO PART B

Part B: The Value of an Advanced Degree

Instructions:

The questions in this section will require you to make an estimate of the possible value of an advanced degree to you. The answers you give should not be based on mathematical calculations but rather should be your opinion of what an advanced degree might mean to you (sometimes this is referred to as a "guesstimate"). With the exception of questions 1 and 4, each question can be answered by checking one appropriate box.

NOTE: Please disregard the numbers found within parentheses for each question. These numbers will be used to code your answers for analysis by computer.

1. (31, 32, 33) Identify the three most recent jobs you have held and the approximate dates of employment - excluding your current job.

Nature of Job	Date Started Month	Date Started Year	Date Terminated Month	Date Terminated Year
(31) _____	____	____	____	____
(32) _____	____	____	____	____
(33) _____	____	____	____	____

2. (34, 35) Please check your present annual salary from the Cooperative Extension Service.

01._____under $6,000
02._____$6,000-$6,999
03._____$7,000-$7,999
04._____$8,000-$8,999
05._____$9,000-$9,999
06._____$10,000-$10,999
07._____$11,000-$11,999
08._____$12,000-$12,999
09._____$13,000-$13,999
10._____$14,000-$14,999
11._____$15,000-$15,999
12._____over $16,000

3. (36) How do you expect your annual salary 5 years from now will compare with what you earn at present? (without an advanced degree)

1._____same as now
2._____10-19% larger in 5 years
3._____20-29% larger in 5 years
4._____30-39% larger in 5 years
5._____40-49% larger in 5 years
6._____over 50% larger in 5 years
7._____will probably be retired

4. (37) Think of the most attractive (or least unattractive) salaried job that you are qualified to hold other than a job with the Cooperative Extension Service. Please name this one job and be as specific as possible:

_____

5. (38) Under what salary conditions would you accept this job rather than your present county agent's position?

1._____more than 20% less in the alternative
2._____10-19% less in the alternative job
3._____approximately the same (+ or - 10%)
4._____10-19% more in the alternative job
5._____20-29% more in the alternative job
6._____30-39% more in the alternative job
7._____40-49% more in the alternative job
8._____50% or more
9._____you wouldn't accept another job no matter what the salary

Part B. continued

6. (39) Disregarding your answer to question 5, if you were to take such a job (named in 4), how do you think your pay actually might compare with what you are now earning?
   1._____more than 20% less in the alternative
   2._____10-19% less in the alternative job
   3._____approximately the same (+ or - 10%)
   4._____10-19% more in the alternative job
   5._____20-29% more in the alternative job
   6._____30-39% more in the alternative job
   7._____40-49% more in the alternative job
   8._____50% or more

7. (40) If you were to take such a job (named in 4), how do you think your earnings would compare with those in the Extension Service 5 years from now?
   1._____at least 20% less in the alternative job 5 years from now
   2._____10-19% less in the alternative job 5 years from now
   3._____approximately the same (+ or - 10%)
   4._____10-19% more in the alternative job 5 years from now
   5._____20-29% more in the alternative job 5 years from now
   6._____30-39% more in the alternative job 5 years from now
   7._____40-49% more in the alternative job 5 years from now
   8._____over 50% more in the alternative job 5 years from now

8. (41) Suppose you received an advanced degree within the next five years. How would your salary then compare with your estimated salary in the Cooperative Extension Service without an advanced degree at the same time?
   1._____same
   2._____10-19% larger with an advanced degree
   3._____20-29% larger with an advanced degree
   4._____30-39% larger with an advanced degree
   5._____40-49% larger with an advanced degree
   6._____over 50% larger with an advanced degree

9. (42) When is (or would have been) the most opportune time for you to secure an advanced degree?
   1._____before joining the Extension Service
   2._____1-5 years after joining the Extension Service
   3._____6-10 years after joining the Extension Service
   4._____11-15 years after joining the Extension Service
   5._____16-20 years after joining the Extension Service
   6._____over 21 years after joining the Extension Service

10. (43) How much difficulty did you (or would you) have getting admitted to graduate school?
   1._____I had no trouble
   2._____it took some doing to get me admitted
   3._____it took a long hard process before I was admitted
   4._____I have not been admitted to graduate school

Part B. continued

11. (44) With regard to obtaining an advanced degree, what have you decided to do?
1._____get an advanced degree
2._____postpone the decision until some future date
3._____not get another degree

IMPORTANT: IF YOU ANSWERED QUESTION 11 WITH 1, ANSWER SECTION A OF QUESTIONS 12-14 AND OMIT SECTION B. IF YOU ANSWERED QUESTION 11 WITH EITHER 2 OR 3, OMIT SECTION A AND ANSWER SECTION B.

12-14. Section A or B. Rank the THREE most important reasons for the advanced degree decision you identified in question 11.

Section A (If 11 was answered 1)	12. (45, 46) Check the most important reason	13. (47, 48) Check the 2nd most important reason	14. (49, 50) Check the 3d most important reason
Increased earnings	(01)_____	_____	_____
Desire for another job	(02)_____	_____	_____
To gain prestige in the Extension Service	(03)_____	_____	_____
To develop new competencies	(04)_____	_____	_____
To gain esteem from my clientele	(05)_____	_____	_____
To become reoriented to Extension work	(06)_____	_____	_____
So I can get away from my work for a while	(07)_____	_____	_____
Because I enjoy the academic life	(08)_____	_____	_____
The cost of schooling will be low because of financial aids available	(09)_____	_____	_____
I will be personally more satisfied with an advanced degree	(10)_____	_____	_____
Graduate school is convenient for me	(11)_____	_____	_____
All the agents are getting advanced degrees	(12)_____	_____	_____
My supervisor is encouraging me to do it	(13)_____	_____	_____
My family feels that I should go to school	(14)_____	_____	_____
I can be better prepared to leave Extension if I get a degree	(15)_____	_____	_____
I don't anticipate any difficulty with graduate study	(16)_____	_____	_____
Other _____ (please identify)	(17)_____	_____	_____

Part B. continued

Section B (If 11 was answered 2 or 3)	12. (45, 46) Check the most important reason	13. (47, 48) Check the 2nd most important reason	14. (49, 50) Check the 3d most important reason
No increased earnings	(01)_____	_____	_____
No desire for another job	(02)_____	_____	_____
No added prestige in the Extension Service for advanced degrees	(03)_____	_____	_____
I can secure added competencies by other means	(04)_____	_____	_____
My clientele would resent my advanced degree	(05)_____	_____	_____
I can become reoriented to Extension work by other means	(06)_____	_____	_____
I hesitate to get away from the county for any length of time because my program would suffer	(07)_____	_____	_____
I dislike studying	(08)_____	_____	_____
I don't have the money for an advanced degree	(09)_____	_____	_____
I can find no satisfaction with an advanced degree	(10)_____	_____	_____
Graduate study is not convenient for me	(11)_____	_____	_____
Few of my county agent friends have advanced degrees	(12)_____	_____	_____
My supervisor doesn't care whether I get an advanced degree or not	(13)_____	_____	_____
My family discourages me	(14)_____	_____	_____
I can leave Extension before I get a degree	(15)_____	_____	_____
Graduate study may be too difficult for me	(16)_____	_____	_____
Other _____ (please identify)	(17)_____	_____	_____

Part B. continued

15. (51) If you were asked to advise a 22 year old man with a bachelor's degree just beginning county extension work about whether to obtain an advanced degree or not, what would you advise him?

1._____do not get an advanced degree
2._____I am uncertain what I'd advise him
3._____get an advanced degree

IMPORTANT: IF YOU ANSWERED QUESTION 15 WITH 3, ANSWER SECTION A OF QUESTIONS 16-18 AND OMIT SECTION B. IF YOU ANSWERED QUESTION 15 WITH EITHER 1 OR 2, OMIT SECTION A AND ANSWER SECTION B.

16-18. Section A or B. Rank the THREE most important reasons you advised the young agent regarding an advanced degree the way you did in question 15.

Section A (If 15 was answered 3)	16. (52,53) Check the most important reason	17. (54,55) Check the 2nd most important reason	18. (56,57) Check the 3rd most important reason
It will result in increased earnings.	(01)_____	_____	_____
Better jobs will be available because of it.	(02)_____	_____	_____
He will have more prestige within the organization.	(03)_____	_____	_____
He will develop new essential competencies.	(04)_____	_____	_____
The clientele respects agents with advanced degrees more.	(05)_____	_____	_____
It will better orient him to Extension work	(06)_____	_____	_____
It will give him a chance to leave the county for awhile.	(07)_____	_____	_____
He will enjoy studying.	(08)_____	_____	_____
The cost of graduate school will be low because of financial aids available.	(09)_____	_____	_____
He will receive much personal satisfaction from it.	(10)_____	_____	_____
Graduate study is relatively convenient now.	(11)_____	_____	_____
All the agents are getting advanced degrees.	(12)_____	_____	_____
He'll improve his relationship with his supervisor.	(13)_____	_____	_____
His family will be proud of him.	(14)_____	_____	_____
He should go to school while good study habits prevail.	(15)_____	_____	_____
Other _____ (please identify)	(16)_____	_____	_____

Part B. continued

Section B (If 15 was answered 1 or 2)	16. (52,53) Check the most important reason	17. (54,55) Check the 2nd most important reason	18. (56,57) Check the 3rd most important reason
The degree will result in no increased earnings. (01)			
No better jobs will be available because of degree. (02)			
The degree will bring no added organizational prestige. (03)			
New competencies can be added in other ways besides graduate school. (04)			
The clientele does not care about advanced degrees. (05)			
Other methods of orientation to Extension are better than graduate study. (06)			
The Extension program is better off if an agent does not leave his county for extended periods of time. (07)			
Good extension agents do not like studying. (08)			
Graduate school costs a lot of money regardless of fellowships, scholarships, etc. (09)			
I doubt if an agent can get personal satisfaction from securing an advanced degree. (10)			
Graduate school is still relatively inconvenient to most agents. (11)			
Few agents are getting advanced degrees. (12)			
Supervisors will treat him the same whether he has a degree or not. (13)			
His family will be better off without suffering through graduate school. (14)			
He should get experience before thinking about graduate school. (15)			
Other _____ (16)			

19. (58) When would you recommend the 22 year old agent plan to obtain his advanced degree?
    1. _____ right after he receives his undergraduate degree
    2. _____ after working 3 years
    3. _____ when he is eligible for a sabbatical leave
    4. _____ when his supervisor forces him to obtain it
    5. _____ never

PLEASE GO TO PART C

Part C: Factors Considered In Deciding About Obtaining Advanced Degrees

Instructions:

In reaching a decision about obtaining an advanced degree many county extension agents consider different factors as being important. The following statements are examples of factors some agents feel are important. Would you consider each statement based on your reply to question 11 in part B which shows your decision about an advanced degree for yourself? The statements below exhibit many different points of view. Indicate the extent of your agreement or disagreement in each case as it relates to your degree decision by checking the appropriate column:

NOTE: Please disregard the numbers found within parentheses for each question. These numbers will be used to code your answers for analysis by computer.

	Agree Strongly	Agree Mildly	Disagree Mildly	Disagree Strongly	No Opinion
1. (10) Agents make more money after getting advanced degrees.					
2. (11) I will be able to move to a better county job by getting an advanced degree.					
3. (12) An agent with an advanced degree has more prestige than an agent without an advanced degree.					
4. (13) My present job would be done more effectively if I had an advanced degree.					
5. (14) My county clientele would think more of me as an educator if I had an advanced degree.					
6. (15) Most of my neighboring county agents have advanced degrees.					
7. (16) After a few years in a county, one excellent method of escaping from the county (but remaining in Extension work) is to return for an advanced degree.					
8. (17) If I got an advanced degree, it would be easier for me to leave the Cooperative Extension Service than it is now.					
9. (18) I really enjoyed studying in college while an undergraduate.					
10. (19) Graduate study would probably be too difficult for me.					
11. (20) Fellowships, scholarships, and sabbatical leaves allow an agent to obtain an advanced degree without much financial loss.					

Part C. continued

		Agree Strongly	Agree Mildly	Disagree Mildly	Disagree Strongly	No Opinion
12.	(21) My supervisor has been privately suggesting to me that I get an advanced degree.					
13.	(22) My family thinks my getting an advanced degree is important and essential.					
14.	(23) After an absence, an agent can fit into county agent work better if he secures a degree before returning.					
15.	(24) I believe graduate school could help me achieve my potential as a human being.					
16.	(25) The distance from an agent's home to graduate school classes is not very important today.					
17.	(26) Degrees and annual salaries have very little relation to one another in Extension.					
18.	(27) I don't need an advanced degree to get a more desirable job.					
19.	(28) An advanced degree for me would result in added recognition from others in the Extension Service.					
20.	(29) The people in my county are demanding more knowledge and skills of me; an advanced degree would help meet this demand.					
21.	(30) Other agents are held in high esteem by the people in their counties because of advanced degrees.					
22.	(31) If I went back to school for an advanced degree, my county agent friends might tease me about being overly ambitious.					
23.	(32) In the final analysis, I can be of more service to my county and/or community by working here on the job rather than attending graduate school.					
24.	(33) It appears to me that most of the agents who get an advanced degree stay with the Cooperative Extension Service.					

Part C. continued

	Agree Strongly	Agree Mildly	Disagree Mildly	Disagree Strongly	No Opinion
25. (34) I think obtaining an advanced degree would be an enjoyable experience primarily because of the people I'd meet at school.					
26. (35) When I consider graduate study, I feel the work would be relatively easy since I had little trouble with previous schooling.					
27. (36) While away at graduate school, agents do not get their annual raises in salary.					
28. (37) I honestly believe my supervisor is opposed to agents getting higher degrees than he has.					
29. (38) My family is too involved in the activities of our community to even consider our leaving for graduate school.					
30. (39) Agents who desire reorientation into Extension obtain it without securing a degree.					
31. (40) Agents who say they get personal satisfaction from graduate study are generally trying to conceal another reason for attending like an increased salary or better job.					
32. (41) The fact that graduate courses are being offered close to an agent's home is important for encouraging agents to obtain degrees.					
33. (42) I need an advanced degree to get the higher salaried jobs outside of Extension.					
34. (43) I can get any job I'd really like in Extension without an advanced degree.					
35. (44) An advanced degree has nothing to do with prestige among workers in the Extension Service.					
36. (45) I can secure ample improved or different knowledge and skills without getting an advanced degree.					
37. (46) My academic degree has little to do with what others in my county think of me as a county agent.					

Part C. continued	Agree Strongly	Agree Mildly	Disagree Mildly	Disagree Strongly	No Opinion
38. (47) The county agent's association in my state encourages us to get advanced degrees.					
39. (48) In my county I work long hard days; if I went to graduate school I could spend more time with my family and live a more normal life for a while.					
40. (49) Generally an agent who wants to leave the Cooperative Extension Service does not get an advance degree before leaving.					
41. (50) If I could do anything I wanted to do, I'd prefer reading books, attending classes, or some other form of learning.					
42. (51) I can learn practical information readily, but find it difficult to learn the theoretical material needed for graduate study.					
43. (52) I simply cannot afford the immediate cost of an advanced degree.					
44. (53) The administrator in my area feels that an advanced degree is necessary for me.					
45. (54) My family would object if I left them home alone and returned for an advanced degree.					
46. (55) An individual newly hired in Extension with experience from another organization will not become acquainted with Extension in graduate school.					
47. (56) Conquering graduate study by obtaining a degree is the type of challenge I enjoy.					
48. (57) Before an agent even considers the convenience of the location of graduate school, he makes the decision whether to secure an advanced degree or not.					

Part D: The Effect of Your Extension Service Administrators on Advanced Degree Decisions

Instructions:

The administrators of a state Cooperative Extension Service may affect an individual agent's decision about securing an advanced degree. One obvious method is by hiring only agents with advanced degrees. Another method often used is to attempt to encourage experienced agents to return for graduate study. The ways an administrator can affect an agent's decision in the second method often vary from administrator to administrator or from state to state.

The following statements describe various ways some administrators attempt to influence experienced agents to secure advanced degrees. Please read each statement and give your opinion about how frequently the idea expressed occurs in your Cooperative Extension Service. Remember your reply is confidential - so be frank with your responses. Check the one most appropriate column for each statement.

NOTE: Please disregard the numbers found within parentheses for each question. These numbers will be used to code your answers for analysis by computer.

In my Cooperative Extension Service:	Always	Often	Seldom	Never	Uncertain
1. (10) An agent who secures an advanced degree is offered a new and better position.					
2. (11) An agent with an advanced degree is respected by administrators more than an agent without one.					
3. (12) Advanced degrees are considered by administrators as the most important method of improving the competence of an agent.					
4. (13) An agent is encouraged to get an advanced degree when he is required to leave a county for some reason.					
5. (14) An agent who returns for an advanced degree is paid well enough through fellowships, scholarships, or sabbatical leaves to almost meet the annual salary he had before leaving the county.					
6. (15) The agent is encouraged to secure an advanced degree personally by his supervisor.					
7. (16) The local county people are provided fill-in agents by the administrators when the permanent agent leaves for graduate school.					
8. (17) An agent with an advanced degree is paid a higher salary than an agent without an advanced degree.					
9. (18) If an agent wants a choice in county positions, he is told to get an advanced degree.					
10. (19) Administrators give added preferred responsibility such as committee work to agents with advanced degrees.					
11. (20) Agents are told by administrators that advanced degrees are badges of competence which are needed to successfully relate to industries, organizations and educational institutions.					

Part D. continued

In my Cooperative Extension Service:	Always	Often	Seldom	Never	Uncer-tain
12. (21) An agent who becomes bored with his job is encouraged by his administrator to return for an advanced degree					
13. (22) An agent who returns for an advanced degree continues to get salary increases despite his absence.					
14. (23) An agent will return for an advanced degree based on private conversations with his immediate supervisor.					
15. (24) When an agent leaves for graduate school in our state, his administrator informs the county people of the reason for and value in his absence.					
16. (25) Agents without advanced degrees generally work in the lower paying counties.					
17. (26) Agents with advanced degrees are offered positions which permit them to work with more interesting people or organizations.					
18. (27) Agents with advanced degrees get higher rank than do agents without advanced degrees.					
19. (28) Our administrators insure that advanced degrees can be considered as an indication of an agent's increased skill and knowledge by helping to provide relevant graduate courses.					
20. (29) When an agent's work begins to decrease in quantity and/or quality, an administrator will suggest graduate study.					
21. (30) Agents can obtain an advanced degree without a large economic sacrifice.					
22. (31) Supervisors are generally friendlier to agents with advanced degrees.					
23. (32) The local extension council in the county is always informed by an administrator when the agent decides to return to graduate school.					
24. (33) Considering both the costs and benefits of obtaining an advanced degree an agent makes a financial profit by getting an advanced degree.					

THANK YOU.

Appendix B

Questionnaire Sent to Agents

With Advanced Degree

Appendix B

Questionnaire Sent to Agents With

Advanced Degree

ADVANCED DEGREE DECISION-MAKING QUESTIONNAIRE

The following questionnaire has been prepared to obtain your ideas on advanced degrees for county agents. For the purpose of this study, advanced degrees are considered A DEGREE BEYOND A BACHELOR'S DEGREE in any field of study. The questionnaire is divided into four parts that have questions composed to provide a short (and relatively painless) answering session for you. The entire process should not take more than 30 minutes to complete.

Please read the instructions for each part carefully, and check the answers that best express your ideas about the subject. Your name has been selected at random from the list of county agents in the United States; your answers will be combined with those of other agents in the sample and will be confidential and never used or identified individually. The results of your answers, in combination with answers from your co-workers, will be valuable for aiding county agents and Cooperative Extension administrators make future individual or policy decisions about advanced degrees. These individual or policy decisions may then affect the extent to which the Cooperative Extension Service places emphasis on advanced degrees.

According to my records you ___/___ do have an advanced degree at this time. If my information is inaccurate, please return this questionnaire to me without completing it, and I will send you the proper form. If the information is correct, please give me your frank answers to the following questions.

PLEASE RETURN BY SEPTEMBER 15 TO:

Patrick Borich, District Supervisor
County Extension Work
Cooperative Extension Service
University of Minnesota
Coffey Hall
St. Paul, Minnesota 55101

Part A: Your Vital Statistics

Instructions:

Please check the one reply for each question that best applies to you. Answer all questions based on the situation today; that is, if you will be age 35 tomorrow, you would reply age 34 for question 1.

NOTE: Please disregard the numbers found within parentheses for each question. These numbers will be used to code your answers for analysis by computer.

1. (10, 11) What is your age? _____

2. (12) What is your present marital status?
   1. _____ single
   2. _____ married without children
   3. _____ married with children not at home
   4. _____ married with children at home (13) number_____
   5. _____ widowed or divorced without children at home
   6. _____ widowed or divorced with children at home (13) number_____

3. (14, 15) How many years have you worked for the Cooperative Extension Service? (Please include work in other states.) _____

4. (16, 17, 18) What is the highest grade in school achieved by:

	(16) Your Father	(17) Your Mother	(18) Yourself
1. less than grade 8	1. _____	1. _____	1. _____
2. grade 8	2. _____	2. _____	2. _____
3. grade 12	3. _____	3. _____	3. _____
4. two years of college	4. _____	4. _____	4. _____
5. bachelor's degree	5. _____	5. _____	5. _____
6. bachelor's degree plus some graduate study	6. _____	6. _____	6. _____
7. master's degree	7. _____	7. _____	7. _____
8. master's degree plus some graduate study	8. _____	8. _____	8. _____
9. doctor's degree	9. _____	9. _____	9. _____

5. (19, 20) Were either of your parents teachers?

	(19) Your Father	(20) Your Mother
1. yes	1. _____	1. _____
2. no	2. _____	2. _____

6. (21) In your present position, are you the agent who is administratively responsible for your county extension office?
   1._____yes 2._____no

Part A. continued

7. If you were to consider returning for an advanced degree, what college or university would you plan to attend? (If you already have an advanced degree, which college or university did you attend?) Please name one.

_____

8. (22, 23, 24) How far is the college or university named in question 7 located from your present home? Give approximate number of miles. _____

9. (25, 26) How many hours does it take to drive by car from your home to the college or university named in question 7? _____

10. (27) What would you estimate your direct costs to be for an advanced degree if or when you attended the college or university named above? (Direct costs include tuition, books, and any other educational expenses exclusive of living costs.)

1._____less than $250
2._____$251-$500
3._____$501-$750
4._____$751-$1,000
5._____$1,001-$1,250
6._____$1,251-$1,500
7._____over $1,500 (If over $1,500, please estimate the approximate amount_____.)

11. (28) Do you have any physical ailments that would prevent you from attending graduate school?
1._____yes 2._____no

12. (29) Do any of your brothers or sisters have (or are working toward) advanced degrees?
1._____yes 2._____no

13. (30) Do any of your wife's brothers or sisters have (or are working toward) advanced degrees?
1._____yes 2._____no

PLEASE GO TO PART B

Part B: The Value of an Advanced Degree

Instructions:

The questions in this section will require you to make an estimate of the value of your advanced degree. The answers you give should not be based on mathematical calculations but rather should be your opinion of what an advanced degree has meant to you (somtimes this is referred to as a "guesstimate"). With the exception of questions 1 and 5, each question can be answered by checking one appropriate box.

NOTE: Please disregard the numbers found within parentheses for each question. These numbers will be used to code your answers for analysis by computer.

1. (31, 32, 33) Identify the three most recent jobs you have held (exclusive of Extension) and the approximate dates of employment - excluding your current job.

Nature of Job	Date Started Month	Date Started Year	Date Terminated Month	Date Terminated Year
(31) _____	____	____	____	____
(32) _____	____	____	____	____
(33) _____	____	____	____	____

2. (34, 35) Please check you present annual salary from the Cooperative Extension Service:

01._____under $6,000
02._____$6,000-$6,999
03._____$7,000-$7,999
04._____$8,000-$8,999
05._____$9,000-$9,999
06._____$10,000-$10,999
07._____$11,000-$11,999
08._____$12,000-$12,999
09._____$13,000-$13,999
10._____$14,000-$14,999
11._____$15,000-$15,999
12._____over $16,000

3. (36) How do you expect your annual salary 5 years from now will compare with what you earn at present?

1._____same as now
2._____10-19% larger in 5 years
3._____20-29% larger in 5 years
4._____30-39% larger in 5 years
5._____40-49% larger in 5 years
6._____over 50% larger in 5 years
7._____will probably be retired

4. (37) What would your salary be like now if you did not have an advanced degree? Compare it to your present salary:

1._____over 50% smaller without the advanced degree
2._____40-49% smaller without the advanced degree
3._____30-39% smaller without the advanced degree
4._____20-29% smaller without the advanced degree
5._____10-19% smaller without the advanced degree
6._____approximately the same (+ or - 10%)
7._____over 10% larger without the advanced degree

5. (38) Think of the most attractive (or least unattractive) salaried job that you are qualified to hold other than a job with the Cooperative Extension Service. Please name this one job below (be as specific as possible):

_____

Part B. continued

6. (39) Under what salary conditions would you accept this job (named in 5) rather than your present county agent's position?

1._____more than 20% less in the alternative
2._____10-19% less in the alternative job
3._____approximately the same (+ or - 10%)
4._____10-19% more in the alternative job
5._____20-29% more in the alternative job
6._____30-39% more in the alternative job
7._____40-49% more in the alternative job
8._____50% or more
9._____you wouldn't accept another job no matter what the salary

7. (40) Disregarding your answer to question 6, if you were to take such a job (named in 5), how do you think your pay actually might compare with what you are now earning?

1._____more than 20% less in the alternative job
2._____10-19% less in the alternative job
3._____approximately the same (+ or - 10%)
4._____10-19% more in the alternative job
5._____20-29% more in the alternative job
6._____30-39% more in the alternative job
7._____40-49% more in the alternative job
8._____50% or more

8. (41) If you were to take such a job (named in 5), how do you think your earnings would compare with those in the Extension Service 5 years from now?

1._____at least 20% less in the alternative job 5 years from now
2._____10-19% less in the alternative job 5 years from now
3._____approximately the same (+ or - 10%)
4._____10-19% more in the alternative job 5 years from now
5._____20-29% more in the alternative job 5 years from now
6._____30-39% more in the alternative job 5 years from now
7._____40-49% more in the alternative job 5 years from now
8._____over 50% more in the alternative job 5 years from now

9. (42) When, approximately, did you receive your advanced degree?

1._____before joining the Extension Service
2._____1-5 years after joining the Extension Service
3._____6-10 years after joining the Extension Service
4._____11-15 years after joining the Extension Service
5._____16-20 years after joining the Extension Service
6._____over 21 years after joining the Extension Service

10. (43) How much difficulty did you have getting admitted to graduate school?

1._____I had no trouble
2._____it took some doing to get me admitted
3._____it was a long hard process before I was admitted
4._____I did not get admitted to graduate school

Part B. continued

11. (44) With regard to your decision to obtain an advanced degree are you:
    1._____satisfied it was the correct decision for you
    2._____satisfied it was not the correct decision for you
    3._____not sure if it was correct or incorrect for you

IMPORTANT: IF YOU ANSWERED QUESTION 11 WITH 1, ANSWER SECTION A OF QUESTIONS 12-14 AND OMIT SECTION B. IF YOU ANSWERED QUESTION 11 WITH EITHER 2 OR 3, OMIT SECTION A AND ANSWER SECTION B.

12-14. Section A or B. Rank the THREE most important reasons for the advanced degree decision you identified in question 11.

Section A (If 11 was answered 1)	12. (45,46) Check the most important reason	13. (47,48) Check the 2nd most important reason	14. (49,50) Check the 3rd most important reason
Increased earnings.	(01)_____	_____	_____
Better jobs are available because of the degree.	(02)_____	_____	_____
More prestige in my organization.	(03)_____	_____	_____
I developed new essential competencies.	(04)_____	_____	_____
My clientele respect me more.	(05)_____	_____	_____
I became reoriented to Extension work.	(06)_____	_____	_____
It was good for me and my county program when I left the county for awhile.	(07)_____	_____	_____
I enjoyed studying.	(08)_____	_____	_____
The cost of graduate school was low because of fellowships, GI Bill, sabbatical leaves, etc.	(09)_____	_____	_____
I received much personal satisfaction from the degree.	(10)_____	_____	_____
Graduate school was convenient at the time.	(11)_____	_____	_____
It was the thing to do among my agent friends.	(12)_____	_____	_____
My supervisor asked me to do it.	(13)_____	_____	_____
My family encouraged me to do it.	(14)_____	_____	_____
I was young enough so that graduate school was not difficult at the time.	(15)_____	_____	_____
I was confident graduate school would be easy before I went.	(16)_____	_____	_____
Other _____ (please identify)	(17)_____	_____	_____

Part B. continued

Section B (If 11 was answered 2 or 3)		12. (45, 46) Check the most important reason	13. (47, 48) Check the 2nd most important reason	14. (49, 50) Check the 3rd most important reason
Earnings have not increased due to the degree.	(01)			
Better jobs are not available because of the degree.	(02)			
No added prestige in my organization.	(03)			
No new essential competencies were developed.	(04)			
My clientele do not respect me more for it.	(05)			
It did not help orient me to Extension work.	(06)			
The time I took away hurt the county program.	(07)			
I did not enjoy studying.	(08)			
Graduate School cost me too much	(09)			
I received little personal satisfaction from the degree.	(10)			
Graduate School was not convenient at the time.	(11)			
Hardly any other agents were doing it.	(12)			
My supervisor cared little regarding my attending graduate school.	(13)			
My family was unhappy because I went to graduate school.	(14)			
I was too old for graduate school.	(15)			
Graduate school was more difficult than I thought it would be.	(16)			
Other _____ (please specify)	(17)			

Part B. continued

15. (51) If you were asked to advise a 22 year old man with a bachelor's degree just beginning county extension work about whether to obtain an advanced degree or not, what would you advise him?

1._____do not get an advanced degree
2._____I am uncertain what I'd advise him
3._____get an advanced degree

IMPORTANT: IF YOU ANSWERED QUESTION 15 WITH 3, ANSWER SECTION A OF QUESTIONS 16-18 AND OMIT SECTION B. IF YOU ANSWERED QUESTION 15 WITH EITHER 1 OR 2, OMIT SECTION A AND ANSWER SECTION B.

16-18. Section A or B. Rank the THREE most important reasons you advised the young agent regarding an advanced degree the way you did in question 15.

Section A (If 15 was answered 3)		16. (52,53) Check the most important reason	17. (54,55) Check the 2nd most important reason	18. (56,57) Check the 3rd most important reason
It will result in increased earnings.	(01)			
Better jobs will be available because of it.	(02)			
He will have more prestige within the organization.	(03)			
He will develop new essential competencies.	(04)			
The clientele respects agents with advanced degrees more.	(05)			
It will better orient him to Extension work	(06)			
It will give him a chance to leave the county for awhile.	(07)			
He will enjoy studying.	(08)			
The cost of graduate school will be low because of financial aids available.	(09)			
He will receive much personal satisfaction from it.	(10)			
Graduate study is relatively convenient now.	(11)			
All the agents are getting advanced degrees.	(12)			
He'll improve his relationship with his supervisor.	(13)			
His family will be proud of him.	(14)			
He should go to school while good study habits prevail.	(15)			
Other _____ (please identify)	(16)			

Part B. continued

Section B (If 15 was answered 1 or 2)	16. (52,53) Check the most important reason	17. (54,55) Check the 2nd most important reason	18. (56,57) Check the 3rd most important reason
The degree will result in no increased earnings. (01)			
No better jobs will be available because of degree. (02)			
The degree will bring no added organizational prestige. (03)			
New competencies can be added in other ways besides graduate school. (04)			
The clientele does not care about advanced degrees. (05)			
Other methods of orientation to Extension are better than graduate study. (06)			
The Extension program is better off if an agent does not leave his county for extended periods of time. (07)			
Good extension agents do not like studying. (08)			
Graduate school costs a lot of money regardless of fellowships, scholarships, etc. (09)			
I doubt if an agent can get personal satisfaction from securing an advanced degree. (10)			
Graduate school is still relatively inconvenient to most agents. (11)			
Few agents are getting advanced degrees. (12)			
Supervisors will treat him the same whether he has a degree or not. (13)			
His family will be better off without suffering through graduate school. (14)			
He should get experience before thinking about graduate school. (15)			
Other _____ (16)			

19. (58) When would you recommend the 22 year old agent plan to obtain his advanced degree?
    1. _____ right after he receives his undergraduate degree
    2. _____ after working 3 years
    3. _____ when he is eligible for a sabbatical leave
    4. _____ when his supervisor forces him to obtain it
    5. _____ never

PLEASE GO TO PART C

2

Part C: Factors Considered In Deciding About Obtaining Advanced Degrees

Instructions:

In reaching a decision about obtaining an advanced degree many county extension agents consider different factors as being important. The following statements are examples of factors some agents feel are important. Would you consider each statement based on your reply to question 11 in part B, which shows your decision about an advanced degree for yourself? The statements below exhibit many different points of view. Indicate the extent of your agreement or disagreement in each case as it relates to your degree decision by checking the appropriate column:

NOTE: Please disregard the numbers found within parentheses for each question. These numbers will be used to code your answers for analysis by computer.

	Agree Strongly	Agree Mildly	Disagree Mildly	Disagree Strongly	No Opinion
1. (10) Agents make more money after getting advanced degrees.					
2. (11) I am able to move to better counties because of my advanced degree.					
3. (12) An agent with an advanced degree has more prestige than an agent without an advanced degree.					
4. (13) I do my present job more effectively because I have an advanced degree					
5. (14) My county clientele think more of me as an educator because I acquired my advanced degree.					
6. (15) Most of my neighboring county agents have advanced degrees.					
7. (16) After a few years in a county, one excellent method of escaping from the county (but remaining in extension work) is to return for an advanced degree.					
8. (17) Since I have an advanced degree, it is easier to leave the Cooperative Extension Service than it was before.					
9. (18) I really enjoyed studying in college while an undergraduate.					
10. (19) I thought graduate study was going to be too difficult for me.					
11. (20) Fellowships, scholarships, and sabbatical leaves allow an agent to obtain an advanced degree without much financial loss.					

Part C. continued

		Agree Strongly	Agree Mildly	Disagree Mildly	Disagree Strongly	No Opinion
12.	(21) My supervisor had been privately suggesting to me that I get an advanced degree before I actually did it.					
13.	(22) My family thought my getting an advanced degree was important and essential.					
14.	(23) After an absence, an agent can fit into county agent work better if he secures a degree before returning.					
15.	(24) I believe graduate school helped me achieve my potential as a human being.					
16.	(25) The distance from an agent's home to graduate school classes is not very important today.					
17.	(26) Degrees and annual salaries have very little relation to one another in Extension.					
18.	(27) I didn't need an advanced degree to get a more desirable job.					
19.	(28) My advanced degree has resulted in added recognition from others in the Extension Service.					
20.	(29) The people in my county are demanding more knowledge and skills of me; my advanced degree has helped meet this demand.					
21.	(30) Other agents are held in high esteem by the people in their counties because of advanced degrees.					
22.	(31) When an agent goes back to school for an advanced degree in our state, his county agent friends usually tease him about being overly ambitious.					
23.	(32) I could have been of more service to my county and/or community by working on the job rather than attending graduate school.					
24.	(33) It appears to me that most agents who get an advanced degree stay with the Cooperative Extension Service.					

Part C. continued

		Agree Strongly	Agree Mildly	Disagree Mildly	Disagree Strongly	No Opinion
25.	(34) I think obtaining my advanced degree was an enjoyable experience primarily because of the people I met at school					
26.	(35) When I considered graduate study, I felt the work would be relatively easy since I had little trouble with previous schooling.					
27.	(36) While away at graduate school, agents do not get their annual raises in salary.					
28.	(37) I honestly believe my supervisor is opposed to agents getting higher degrees than he has.					
29.	(38) My family was too involved in the activities of our community to even consider our leaving for graduate school.					
30.	(39) Agents who desire reorientation into Extension obtain it without securing a degree.					
31.	(40) Agents who say they get personal satisfaction from graduate study are generally trying to conceal another reason for attending like an increased salary or a better job.					
32.	(41) The fact that graduate courses are being offered close to an agent's home is important for encouraging agents to obtain degrees.					
33.	(42) I need an advanced degree to get the higher salaried jobs outside of Extension.					
34.	(43) I could have obtained any job I really liked in Extension without an advanced degree.					
35.	(44) An advanced degree has nothing to do with prestige among workers in the Extension Service.					
36.	(45) I could have secured ample improved or different knowledge and skills without getting an advanced degree.					
37.	(46) My academic degree has little to do with what others in my county think of me as a county agent.					

Part C. continued

		Agree Strongly	Agree Mildly	Disagree Mildly	Disagree Strongly	No Opinion
38.	(47) The county agent's association in my state encourages us to get advanced degrees.					
39.	(48) In my county I work long hard days; when I went to graduate school I spent more time with my family and lived a normal life for a while.					
40.	(49) Generally an agent who wants to leave the Cooperative Extension Service does not get an advanced degree before leaving.					
41.	(50) If I could do anything I wanted to do, I'd prefer reading books, attending classes, or some other form of learning.					
42.	(51) I can learn practical information readily, but I found it difficult to learn the theoretical material needed for graduate study.					
43.	(52) I really could not afford the immediate cost of my advanced degree.					
44.	(53) The administrator in my area felt that an advanced degree was necessary for me.					
45.	(54) My family would have objected if I had left them home alone and returned for my advanced degree.					
46.	(55) An individual newly hired in Extension with experience from another organization will not become acquainted with Extension in graduate school.					
47.	(56) Conquering graduate study by obtaining a degree was the type of challenge I enjoyed.					
48.	(57) Before an agent even considers the convenience of the location of graduate school, he makes the decision whether to secure an advanced degree or not.					

Part D: The Effect of Your Extension Service Administrators on Advanced Degree Decisions

Instructions:

The administrators of a state Cooperative Extension Service may affect an individual agent's decision about securing an advanced degree. One obvious method is by hiring only agents with advanced degrees. Another method often used is to attempt to encourage experienced agents to return for graduate study. The ways an administrator can affect an agent's decision in the second method often vary from administrator to administrator or from state to state.

The following statements describe various ways some administrators attempt to influence experienced agents to secure advanced degrees. Please read each statement and give your opinion about how frequently the idea expressed occurs in your Cooperative Extension Service. Remember your reply is confidential - so be frank with your responses. Check the one most appropriate column for each statement.

NOTE: Please disregard the numbers found within parentheses for each question. These numbers will be used to code your answers for analysis by computer.

In my Cooperative Extension Service:	Always	Often	Seldom	Never	Uncertain
1. (10) An agent who secures an advanced degree is offered a new and better position.					
2. (11) An agent with an advanced degree is respected by administrators more than an agent without one.					
3. (12) Advanced degrees are considered by administrators as the most important method of improving the competence of an agent.					
4. (13) An agent is encouraged to get an advanced degree when he is required to leave a county for some reason.					
5. (14) An agent who returns for an advanced degree is paid well enough through fellowships, scholarships, or sabbatical leaves to almost meet the annual salary he had before leaving the county.					
6. (15) The agent is encouraged to secure an advanced degree personally by his supervisor.					
7. (16) The local county people are provided fill-in agents by the administrators when the permanent agent leaves for graduate school.					
8. (17) An agent with an advanced degree is paid a higher salary than an agent without an advanced degree.					
9. (18) If an agent wants a choice in county positions, he is told to get an advanced degree.					
10. (19) Administrators give added preferred responsibility such as committee work to agents with advanced degrees.					
11. (20) Agents are told by administrators that advanced degrees are badges of competence which are needed to successfully relate to industries, organizations and educational institutions.					

Part D. continued

In my Cooperative Extension Service:	Always	Often	Seldom	Never	Uncer-tain
12. (21) An agent who becomes bored with his job is encouraged by his administrator to return for an advanced degree					
13. (22) An agent who returns for an advanced degree continues to get salary increases despite his absence.					
14. (23) An agent will return for an advanced degree based on private conversations with his immediate supervisor.					
15. (24) When an agent leaves for graduate school in our state, his administrator informs the county people of the reason for and value in his absence.					
16. (25) Agents without advanced degrees generally work in the lower paying counties.					
17. (26) Agents with advanced degrees are offered positions which permit them to work with more interesting people or organizations.					
18. (27) Agents with advanced degrees get higher rank than do agents without advanced degrees.					
19. (28) Our administrators insure that advanced degrees can be considered as an indication of an agent's increased skill and knowledge by helping to provide relevant graduate courses.					
20. (29) When an agent's work begins to decrease in quantity and/or quality, an administrator will suggest graduate study.					
21. (30) Agents can obtain an advanced degree without a large economic sacrifice.					
22. (31) Supervisors are generally friendlier to agents with advanced degrees.					
23. (32) The local extension council in the county is always informed by an administrator when the agent decides to return to graduate school.					
24. (33) Considering both the costs and benefits of obtaining an advanced degree an agent makes a financial profit by getting an advanced degree.					

THANK YOU.

Appendix C

Summaries of Regression Analyses

by Individual and State -

Personal and Administrative Factors

in the Agent Advanced Degree Decision

TABLE C-1

SUMMARY OF INDIVIDUAL ANALYSES - PERSONAL FACTORS IN AGENT ADVANCED DEGREE DECISION

Agent Degree Group	Selected Variables	F	Index of Factors	F	B	Agent Advanced Degree Decision
A. Agents Without Advanced Degrees	% Ad. Deg. in State (+)	13.33**	Administrative Persuasion	41.55**	.2744	Personal Decision (Mult. R^2 = .309)
	Age (-)	7.75**				
	Salary (-)	6.06*				
	Degree Cost (+)	35.79**	Economic Sacrifice	20.40**	-.1938	
	% Ad. Deg. in State (-)	10.04**				
	No. of Children (+)	9.94**				
	% Ad. Deg. in State (+)	12.49**	Better Job Opportunities	14.73**	.2395	
	Salary (-)	8.21**				
	Age (+)	4.08*	Formal School Difficulty	13.65**	-.1546	
	Perception of Alternate Employment (+)	3.96*				
	Tenure (-)	11.55**	Improved Competence	13.61**	.1912	
	Degree Cost (-)	3.98*				

TABLE C-1 (cont.)

Agent Degree Group	Selected Variables	F	Index of Factors	F	B	Agent Advanced Degree Decision
A. Agents Without Advanced Degrees (cont.)	State Extension Budget (+)	4.07*	Prestige	16.78**	.2063	Recommendation to New Agent (Mult. R^2 - .090)
	Salary (-)	14.71**	Financial Gain	6.56**	.1295	
	% Ad. Deg. in State (+)	12.44**				
	Per Capita Education Expense (+)	5.31*	Supervisor-Peer Support	4.19*	.0975	
	Economic Commitment (+)	5.04*				
	Tenure (+)	4.67*				
B. Agents With Advanced Degrees	Salary (+)	7.77**	Improved Competence	11.23**	.1894	Personal Decision (Mult. R^2 - .098)
	Extension Budget in State (+)	5.67*				
	Per Capita Education Expense (-)	5.58*				
	No. of Children (+)	4.18*				
	Tenure (-)	4.41*	Better Job Opportunities	8.48**	.1645	

TABLE C-1 (cont.)

Agent Degree Group	Selected Variables	F	Index of Factors	F	B	Agent Advanced Degree Decision
B. Agents With Advanced Degrees (cont.)	Salary (+)	16.33**	Supervisor-Peer Support	23.54**	.2394	Recommendation to New Agents (Mult. R^2 = .149)
	Tenure (-)	8.99**				
	Salary (+)	5.91*				
	No. of Children (+)	4.22*	Financial Gain	10.48**	.1629	
	Perception of Alternative Employment (-)	4.08*				
	% Ad. Deg. in State (+)	4.08*				
	Tenure (-)	4.41*	Better Job Opportunities	11.36**	.1683	

F = F Ratio in Regression Model
B = Standardized Beta Weight in Model
* = Significance $p<.05$
** = Significance $p<.01$
(+) or (-) = Direction of Variable Effect on Model

89 08

TABLE C-2

SUMMARY OF ANALYSIS OF FACTORS IN AGENT ADVANCED DEGREE DECISION
ON DECISION OF AGENTS WITHOUT DEGREES BY AGE GROUPS

Selected Variables Age	Index of Factor	F	B	Agent Degree Decision	Mult. R^2
25-35 (n = 160)	Economic Sacrifice	18.53**	-.291		
	Formal School Difficulty	10.77**	-.283		
	Better Job Opportunities	9.93**	.316	Personal Decision	.330
	Permanent Escape	9.18**	.206		
	Improved Competence	7.07**	.228		
	Better Job Opportunities	12.06**	.270	Recommendation to New Agent	.121
	Financial Gain	4.14*	.158		
36-44 (n = 127)	Economic Sacrifice	19.10**	-.328		
	Improved Competence	18.86**	.326	Personal Decision	.123
	Administrative Persuasion	10.80**	.242		
	Financial Gain	8.94**	.255	Recommendation to New Agent	.126
	Economic Sacrifice	4.48*	-.182		
45-50 (n = 103)	Administrative Persuasion	15.34**	.365	Personal Decision	.187
	Prestige	18.82**	.409	Recommendation to New Agent	.211
	Economic Sacrifice	5.11*	.210		

* = Significance $p < .05$
** = Significance $p < .01$

TABLE C-3

SUMMARY OF STATE ANALYSES - PERSONAL FACTORS IN AGENT ADVANCED DEGREE DECISION

Selected Variable				Index of Factor		Agent Ad. Deg. Decision	Mult. R^2
State with High % Ad. Deg. (n = 25)	F	State with Low % Ad. Deg. (n = 24)	F		F	B	
State School Level (+)	11.28**						
Mean Mother's Ed. (+)	10.41**	Mean Father's Ed. (-)	6.37*	Economic Sacrifice	14.15**	-.467	
Mean Father's Ed. (-)							
		Mean Tenure (-)	13.91**				
		No. of Male Agents (-)	6.70*				
None		State School Level (-)	9.37**	Permanent Escape	8.35**	-.337	% Yes to Ad. Deg. .500
		Distance from School (+)	6.07*				
		State Ext. Budget (+)	9.01**				
Mean Mother's Ed. (-)	15.06**						
State Ext. Budget (-)	6.11*	None		Financial Gain	6.52*	.310	
None		Mean Marital Status (=)	5.52*	Economic Commitment to Ext.	4.21*	.261	
		% Past Job Ed. (+)	5.32*				

TABLE C-3 (cont.)

Selected V Variable				Index of Factor			Agent Ad. Deg. Decision	Mult. R^2
State with High % Ad. Deg. (n = 25)	F	State with Low % Ad. Deg. (n = 24)	F		F	B		
No. Male Agents (+)	6.17*	State Ext. Budget (+)	4.57*	Prestige	8.57**	.375	% Yes to New Agent Ad. Degree	.365
		(See above)		Permanent Escape	6.40*	-.306		
Mean Tenure (+)	12.75**	None		Improved Competence	5.75*	.416	% With Advanced Degree	.434
Marital Status (-)	4.68*							
State Level of School (-)	6.07*	None		Administrative Persuasion	5.39*	.283		
		(See above)		Economic Sacrifice	9.69**	.382		

* = Significance $p<.05$
** = Significance $p<.01$

TABLE C-4

SUMMARY OF INDIVIDUAL ANALYSIS - ADMINISTRATIVE FACTORS
AFFECTING AGENT ADVANCED DEGREE DECISION

Agent Degree Group	Selected Variables	F	Index of Factors	F	B	Agent Advanced Degree Decision	Mult. R^2
A. Agents Without Ad. Deg.	Tenure (-)	6.46**	Better Position	13.07 **	.199		
	Ext. Budget in State (-)	14.99**	Non-Degree Learning Exp.	12.44**	-.175		
	Perception of Alt. Emp. (+)	4.60*	Personal Persuasion	4.88*	.110	Personal Degree Decision	.116
	Degree Cost (-)	4.36*					
	Degree Cost (-)	36.50**	Reduced Cost	4.60*	.105		
	Economic Commitment to Ext. Work (+)	3.86*					
			Economic Advantage	3.67ns	.107		
	Economic Commitment to Ext. Work (+)	8.35**	Economic Advantage	14.16**	.184	Recommendation to New Agent	.038
	Ext. Budget in State(-)	6.17*					
	Salary (-)	4.78*					
	Years in Ext. (-)	4.18*					

12

TABLE C-4 (cont.)

Agent Degree Group	Selected Variables	F	Index of Factors	F	B	Agent Advanced Degree Decision	Mult. R^2
B. Agents with Ad. Deg.	Salary (+)	10.44**	Economic Advantage	33.61**	.2900	Personal Degree Decision	.084
	Years in Extension (-)	8.64**					
Salary (+)		4.52*	Personal Persuasion	4.61*	.115	Recommendation to New Agent	.083
None significant			"Revitalization" Leave	4.24*	-.106		
see above			Economic Advantage	14.69**	.203		

* = Significance $p<.05$
** = Significance $p<.01$

TABLE C-5

SUMMARY OF STATE ANALYSIS - ADMINISTRATIVE FACTORS AFFECTING AGENT ADVANCED DEGREE DECISION

Selected Variable				Administrative Indexes			Agt. Ad. Deg. Decision	
States with High % of Agents With Advanced Degree	F	States With Low % of Agents With Advanced Degree	F		F	B		Mult. R^2
Past Job-Teaching (+)		Per Capita Ed. Exp.(-)	6.66*					
Mother's Ed. (-)	23.75**			Reduce Cost	5.48*	.262	% Saying Yes to Ad. Degree	.507
Father's Ed. (+)	15.42**							
State Ext. Budget (-)	6.92*							
No. of Male Agents (+)	5.40*							
Mother's Ed. (-)	9.95**							
Marital Status (-)	5.91*							
State Ext. Budget (-)	5.77*	None		Economic Advantage	10.10**	.441		
State School Level (+)	4.89*							
Per Capita Ed. Exp. (+)	9.28**	State Ext. Budget(-)	9.60**	Non-Degree Learning Experiences	5.48*	-.308	% Saying Yes to Young Agt. Ad. Deg.	.380
Mother's Ed. (-)								

TABLE C-5 (cont.)

Selected Variable				Administrative Indexes			Agt. Ad. Deg. Decision	
States with High % of Agents With Advanced Degree	F	States With Low % of Agents With Advanced Degree	F		F	B		Mult. R^2
None		State Ext. Budget(+)	4.68*	Inform Clientele	4.62*	-.296		
None		None		Personal Persuasion	4.25*	.336	% Agts. in State With Ad. Deg.	.398
(See above)				Reduce Cost	8.65**	.379		

* = Significance $p<.05$
** = Significance $p<.01$

Appendix D

The Present Values and Internal Rates of Return for County Extension Agents With and Without Advanced Degrees

TABLE D-1

PRESENT VALUE OF EARNING STREAMS BY STATE FOR 30 AND 40 YEAR OLD EXTENSION AGENTS WITH AND WITHOUT ADVANCED DEGREES AT DISCOUNT RATES OF 0, 10, AND 20 PERCENT INTEREST

State	Discount Rates: 0 Percent		10 Percent		20 Percent	
	Age 30	Age 40	Age 30	Age 40	Age 30	Age 40
Alabama						
Without Degrees	$384,048	$291,674	$ 97,441	$ 97,649	$ 48,232	$ 51,189
With Degrees	364,720	263,018	100,236	89,564	48,341	46,052
Arizona						
Without Degrees	421,415	316,440	105,858	107,354	53,140	56,130
With Degrees	411,370	310,650	100,777	111,560	46,956	60,096
Arkansas						
Without Degrees	346,875	263,608	84,763	88,378	41,803	46,394
With Degrees	352,863	263,330	81,834	83,534	37,411	40,724
California						
Without Degrees	525,817	410,910	121,175	134,997	57,318	69,591
With Degrees	517,171	402,735	116,765	103,680	53,648	65,552
Colorado						
Without Degrees	357,099	274,350	84,539	89,798	40,973	46,658
With Degrees	374,480	277,465	93,351	96,860	44,330	50,111

TABLE D-1 (cont.)

State	Discount Rates: 0 Percent Age 30	0 Percent Age 40	10 Percent Age 30	10 Percent Age 40	20 Percent Age 30	20 Percent Age 40
Florida						
Without Degrees	397,757	294,791	104,071	106,391	52,265	57,673
With Degrees	432,517	320,912	107,815	110,922	51,823	57,917
Georgia						
Without Degrees	404,999	300,115	104,304	104,242	52,630	56,580
With Degrees	364,267	262,307	94,194	95,009	44,626	50,689
Idaho						
Without Degrees	400,458	301,768	99,615	103,251	49,101	54,566
With Degrees	386,695	289,779	93,290	95,996	44,450	49,118
Illinois						
Without Degrees	420,109	320,695	102,029	108,488	49,694	56,925
With Degrees	401,221	303,888	97,888	108,247	45,607	57,597
Indiana						
Without Degrees	398,594	296,486	101,792	103,039	50,801	54,797
With Degrees	429,780	324,841	105,122	109,247	51,381	57,638
Iowa						
Without Degrees	402,042	297,889	102,451	102,137	51,198	54,112
With Degrees	403,193	294,610	102,143	101,813	49,337	53,101

TABLE D-1 (cont.)

State	Discount Rates: 0 Percent Age 30	0 Percent Age 40	10 Percent Age 30	10 Percent Age 40	20 Percent Age 30	20 Percent Age 40
Kansas						
Without Degrees	371,028	276,813	94,005	94,806	47,054	50,316
With Degrees	374,126	278,484	92,250	97,656	43,165	51,780
Kentucky						
Without Degrees	339,177	260,385	83,356	90,727	40,701	48,260
With Degrees	329,712	240,401	83,048	82,040	40,025	42,319
Louisiana						
Without Degrees	369,389	289,070	84,854	94,185	40,490	48,536
With Degrees	406,275	314,005	92,825	100,802	43,496	50,786
Maryland						
Without Degrees	383,747	291,697	93,658	94,557	47,163	48,551
With Degrees	405,365	304,323	97,762	103,972	45,630	54,034
Michigan						
Without Degrees	415,460	306,672	108,425	110,631	53,909	59,990
With Degrees	424,446	311,004	106,484	107,177	51,014	55,963
Minnesota						
Without Degrees	386,487	290,601	97,441	101,730	48,232	55,169
With Degrees	414,844	305,780	100,236	97,461	48,341	49,530

TABLE D-1 (cont.)

State	Discount Rates: 0 Percent Age 30	0 Percent Age 40	10 Percent Age 30	10 Percent Age 40	20 Percent Age 30	20 Percent Age 40
Mississippi						
Without Degrees	328,387	242,957	85,802	87,897	42,806	47,714
With Degrees	321,152	235,337	80,607	78,117	39,555	39,918
Missoui						
Without Degrees	417,122	315,291	103,185	108,920	50,348	58,807
With Degrees	403,540	297,296	101,493	104,495	48,599	56,030
Montana						
Without Degrees	341,454	252,889	87,714	86,942	44,331	46,356
With Degrees	355,718	260,938	88,494	86,878	42,874	44,486
Nebraska						
Without Degrees	401,962	300,239	101,333	102,189	50,595	53,960
With Degrees	427,748	312,642	109,288	105,772	54,579	55,386
New Jersey						
Without Degrees	579,468	468,775	123,198	147,878	56,140	74,548
With Degrees	597,578	491,774	111,956	142,851	44,979	65,546
New Mexico						
Without Degrees	409,982	309,528	101,315	104,073	50,192	54,543
With Degrees	408,296	301,824	100,014	99,746	48,065	50,696

TABLE D-1 (cont.)

State	Discount Rates: 0 Percent Age 30	0 Percent Age 40	10 Percent Age 30	10 Percent Age 40	20 Percent Age 30	20 Percent Age 40
New York						
Without Degrees	388,598	292,922	96,510	98,989	47,985	52,224
With Degrees	413,039	305,586	100,834	100,671	48,309	51,136
North Carolina						
Without Degrees	356,038	267,221	89,525	92,183	44,338	48,936
With Degrees	350,119	256,020	91,366	92,248	45,042	49,972
Ohio						
Without Degrees	372,483	281,073	92,314	94,886	45,852	50,027
With Degrees	381,895	281,182	94,119	93,094	45,320	47,447
Oklahoma						
Without Degrees	356,943	266,887	89,755	92,290	44,260	49,361
With Degrees	361,886	270,378	88,836	93,150	42,154	48,486
Oregon						
Without Degrees	463,638	354,754	111,734	118,149	54,713	61,761
With Degrees	468,364	357,637	108,174	114,909	50,541	57,589
Pennsylvania						
Without Degrees	401,124	312,140	94,597	106,034	45,010	55,315
With Degrees	394,483	295,912	95,231	99,869	44,866	51,758

TABLE D-1 (cont.)

State	Discount Rates: 0 Percent, Age 30	0 Percent, Age 40	10 Percent, Age 30	10 Percent, Age 40	20 Percent, Age 30	20 Percent, Age 40
South Carolina						
Without Degrees	343,282	258,579	85,324	89,113	41,761	47,390
With Degrees	326,986	241,316	79,439	82,692	36,433	42,416
Tennessee						
Without Degrees	352,142	267,340	86,226	89,718	42,569	47,127
With Degrees	378,609	285,535	86,065	89,720	38,940	43,472
Texas						
Without Degrees	363,830	268,249	95,393	96,076	48,032	52,313
With Degrees	362,330	264,839	91,442	90,630	44,381	48,054
Virginia						
Without Degrees	383,550	282,262	99,697	97,645	50,666	52,258
With Degrees	373,369	274,608	91,647	96,568	43,881	45,923
Washington						
Without Degrees	402,408	305,923	98,261	102,529	48,442	53,810
With Degrees	410,306	305,921	95,317	97,124	43,612	47,374
West Virginia						
Without Degrees	378,325	290,500	91,890	101,009	44,141	53,638
With Degrees	369,138	274,414	90,449	92,198	43,242	47,661

TABLE D-1 (cont.)

State	Discount Rates: 0 Percent, Age 30	0 Percent, Age 40	10 Percent, Age 30	10 Percent, Age 40	20 Percent, Age 30	20 Percent, Age 40
Wisconsin						
Without Degrees	386,755	294,270	94,769	98,828	46,857	51,610
With Degrees	400,376	299,006	96,585	99,620	45,671	50,933
USA						
Without Degrees	384,868	290,279	96,033	100,042	47,417	53,283
With Degrees	401,938	300,368	97,442	101,532	45,909	52,391

TABLE D-2

DETERMINATION OF INTERNAL RATES OF RETURN FROM PRESENT VALUES
TO AGE 30 IN ARKANSAS AND WISCONSIN

	Arkansas		Wisconsin			Arkansas		Wisconsin	
Interest	Without Ad. Deg.	With Ad. Deg.	Without Ad. Deg.	With Ad. Deg.	Interest	Without Ad. Deg.	With Ad. Deg.	Without Ad. Deg.	With Ad. Deg.
0%	$346,875	$352,863	$386,755	$400,376	11%	$77,268	$74,067	$86,406	$87,732
1%	286,856	290,899	319,978	331,395	12%	70,871	67,441	79,269	80,164
2%	240,164	242,662	268,003	277,574	13%	65,369	61,743	73,131	73,645
3%	203,488	204,748	227,154	235,168	14%	60,600	56,809	67,813	67,990
4%	174,395	174,656	194,736	201,426	15%	56,439	52,505	63,173	63,052
5%	151,092	150,540	168,759	174,317	16%	52,784	48,728	59,097	58,711
6%	132,245	131,026	147,742	152,326	17%	49,553	45,392	55,495	54,873
7%	116,856	115,086	130,575	134,318	18%	46,680	42,430	52,292	51,461
8%	104,171	101,944	116,423	119,435	19%	44,111	39,784	49,429	48,411
9%	93,619	91,010	104,650	107,024	20%	41,803	37,411	46,857	45,671
10%	84,763	81,834	94,769	96,585					
	r = 4%		r = 15%						

ERIC Clearinghouse
APR 19 19/1
on Adult Education

TABLE D-3

INTERNAL RATES OF RETURN FOR EXTENSION AGENTS IN THIRTY-SIX STATES DISCOUNTED BACK TO AGES 30 AND 40

State	Internal Rate of Return Age 30 Percent	Age 40 Percent	State	Internal Rate of Return Age 30 Percent	Age 40 Percent	State	Internal Rate of Return Age 30 Percent	Age 40 Percent
Alabama	<0	<0	Kentucky	<0	<0	North Carolina	3	10
Arizona	<0	>20	Louisiana	>20	>20	Ohio	17	0
Arkansas	4	0	Maryland	16	>20	Oklahoma	8	14
California	<0	<0	Michigan	6	3	Oregon	3	3
Colorado	>20	>20	Minnesota	20	5	Pennsylvania	6	0
Florida	18	>20	Mississippi	<0	<0	South Carolina	<0	<0
Georgia	<0	<0	Missouri	<0	<0	Tennessee	10	10
Idaho	<0	<0	Montana	12	10	Texas	<0	<0
Illinois	<0	11	Nebraska	>20	>20	Virginia	<0	<0
Indiana	>20	>20	New Jersey	3	6	Washington	5	0
Iowa	9	<0	New Mexico	0	0	West Virginia	<0	<0
Kansas	6	>20	New York	>20	15	Wisconsin	15	8
						USA	13	15